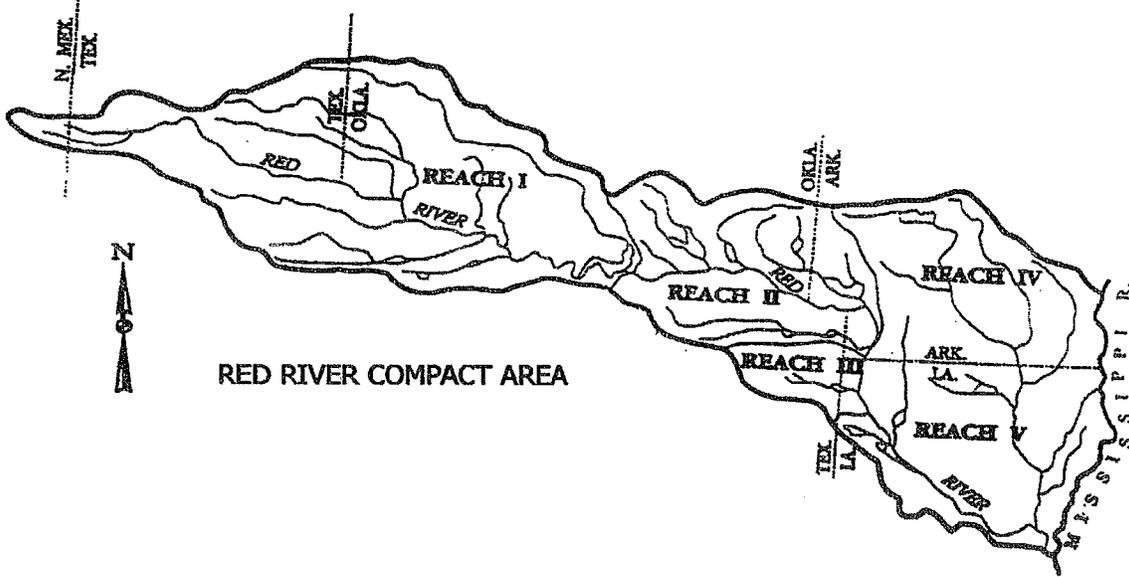


REPORT  
OF THE  
RED RIVER  
COMPACT COMMISSION  
2014



Published  
Sept. 2015



**REPORT  
OF THE  
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2014**

**Arkansas**

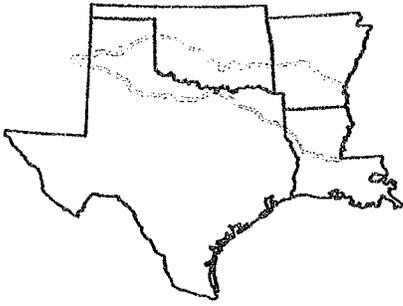
**Oklahoma**

**Louisiana**

**Texas**

Published  
September 2015





# RED RIVER COMPACT COMMISSION

May 30, 2015

The President  
United States of America

The Honorable Asa Hutchinson, Governor  
State of Arkansas

The Honorable Mary Fallin, Governor  
State of Oklahoma

The Honorable Greg Abbott, Governor  
State of Texas

The Honorable Bobby Jindal, Governor  
State of Louisiana

Dear Mr. President and Governors:

Pursuant to Section 10.02 paragraphs (d) and (e) of the Red River Compact, an interstate agreement entered into by the States of Arkansas, Louisiana, Oklahoma, and Texas with the consent of Congress dealing with water of the Red River Basin, and as directed by the Red River Compact Commission (RRCC), the interstate body overseeing the Compact, at its twenty-sixth annual meeting submitted the report of the RRCC, together with an accounting of all funds received and expended by it in the conduct of its work for FY 2013 and a budget covering the anticipated expenses of the Commission for Fiscal Years 2014 through 2016.

The State of Arkansas hosted the thirty-fourth annual meeting on April 22, 2014, in Hot Springs, Arkansas.

Pursuant to the previous agreement to rotate the office of Vice-Chairman and Secretary in connection with the rotation of the annual meeting Host State, the State of Oklahoma accepted the responsibility for both offices for FY 2015. The Office of Treasurer remained with the State of Arkansas.

Sincerely,

A handwritten signature in cursive script that reads "Gordon W. Fassett".

Gordon W. Fassett  
United States Commissioner and Chairman

GWF/lab



**RED RIVER COMPACT COMMISSION  
2014 REPORT**

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**RED RIVER COMPACT COMMISSION  
34<sup>TH</sup> ANNUAL MEETING  
Embassy Suites Hot Springs, Arkansas  
April 22, 2014  
8:30 A.M.**

- I. Call to Order – Chairman Fassett
- II. Welcome
- III. Approval of the Agenda
- IV. Approval of the Minutes of the April 2013 RRCC Annual Meeting held in New Orleans, Louisiana
- V. Report of Chairman Fassett
- VI. Report of the Treasurer – Edward Swaim, Arkansas
- VII. Report of the Commissioners
  - A. Oklahoma
  - B. Texas
  - C. Louisiana
  - D. Arkansas
- VIII. Report of Committees
  - A. Budget Committee – Edward Swaim
  - B. Legal Committee – Crystal Phelps
  - C. Engineering Committee – Ken Brazil
  - D. Environmental and Natural Resources Committee – Ken Brazil
- IX. Federal Agency Reports
  - A. U. S. Army Corps of Engineers
  - B. Bureau of Reclamation
  - C. U.S. Geological Survey
  - D. Natural Resources Conservation Service
- X. Discussion Topics
- XI. New Business

- A. Annual Report – Schedule and Assignments
  - B. Commission Assignments to Committees
  - C. Election of Officers
  - D. Appointments or changes to Committees
  - E. 35<sup>th</sup> Annual Meeting – Oklahoma to host
- XII. Red River Valley Association – Rich Brontoli
- A. Navigation Issues
  - B. Chloride Control Projects
  - C. Congressional Legislation/Budget
  - D. Annual Meeting of RRVA
- XIII. Public Comment
- XIV. Adjournment

**MINUTES  
RED RIVER COMPACT COMMISSION  
34<sup>th</sup> ANNUAL MEETING  
EMBASSY SUITES  
HOT SPRINGS, ARKANSAS  
APRIL 22, 2014  
8:30 a.m.**

**I, II. CALL TO ORDER and WELCOME**

The Thirty-fourth Annual Meeting of the Red River Compact Commission was called to order at 8:30 a.m., April 22, 2014 in Suite A of the Embassy Suites, Hot Springs, Arkansas. Federal Commissioner and Chairman Gordon "Jeff" Fassett recognized a quorum and welcomed everyone to the meeting. He thanked Arkansas for hosting, and then requested each person in attendance make a self-introduction.

**The Red River Compact Commissioners attending:**

Federal Chairman Gordon "Jeff" Fassett  
J. Randy Young, Arkansas  
C. Wayne Dowd, Arkansas  
Arthur Theis, Louisiana  
Bo Bolourchi, Louisiana (Proxy for Christopher P. Knotts)  
J. D. Strong, Oklahoma  
Charles Dobbs, Oklahoma  
William A. Abney, Texas  
Suzy Valentine, Texas (Proxy for Richard A. Hyde)

**Oklahoma Representatives, Federal Agencies and Guests:**

Julie Cunningham, Oklahoma Water Resources Board (OWRB), Oklahoma City, OK  
Jerry Barnett, OWRB, Oklahoma City, OK  
Jason Lewis, US Geological Survey (USGS), Oklahoma City, OK  
Tom Buchanan, Lugert-Altus Irrigation District (LAID), Altus, OK

**Texas Representatives, Federal Agencies and Guests:**

Jane Atwood, Office of the Attorney General of Texas, Austin, TX  
David Harkins, RPS, Austin, TX  
Walt Sears, Northeast Texas Municipal Water District, Hughes Springs, TX

**Louisiana Representatives, Federal Agencies and Guests:**

Brandon Brown, Louisiana Department of Transportation (LADOT), Baton Rouge, LA  
Zahir "Bo" Bolourchi, LADOT, Baton Rouge, LA  
Max Forbes, LADOT, Baton Rouge, LA  
Ed Knight, LADOT, Baton Rouge, LA  
Ben McGee, USGS, LA

**Arkansas Representatives, Federal Agencies and Guests:**

Ann Cash, Boeuf Tensas, Arkansas Natural Resources Commissioner (ANRC)  
Laura Brown, ANRC, Little Rock, AR  
Crystal Phelps, ANRC, Little Rock, AR  
Ken Brazil, ANRC, Little Rock, AR  
Edward Swaim, ANRC, Little Rock, AR  
Debbie Mooreland, Arkansas Association of Conservation Districts  
Eric Brinkman, Arkansas Game and Fish Commission  
Bill Baldwin, USGS, AR  
Randy Childress, NRCS  
Jaysson Funkhouser, USGS, AR

**Guests**

Rich Brontoli, Red River Valley Association (RRVA), Shreveport, LA

**III. APPROVAL OF AGENDA:**

Chairman Fassett stated that the agenda had been previously distributed and requested comments. There being no discussion, he called for a vote. Commissioner Strong moved to approve the Agenda, and Commissioner Young seconded. The motion was unanimously approved (Attachment 1). Chairman Fassett stated that he had received the appropriate proxy letters appointing Suzy Valentine and Bo Bolourchi (Attachments 2, 3).

**IV. APPROVAL OF APRIL 23, 2013 MINUTES:**

The draft Red River Compact Commission minutes of the April 2013 meeting held in New Orleans, Louisiana, previously had been distributed. Chairman Fassett asked if there were corrections, additions or deletions to the minutes; none were made. Commissioner Abney moved to approve the minutes and Commissioner Dowd seconded. The minutes were unanimously approved.

**V. REPORT OF CHAIRMAN:**

Chairman Fassett reported that there had been no intervening formal meetings of the Commission since the last annual meeting. He had followed the U.S. Supreme Court decision relative to Oklahoma for himself as well as for the Commission. A Resolution supporting the USGS Steam Gage Funding was prepared by the Commission and would be presented for signatures under New Business. The Interstate Council on Water Policy (ICWP) works with other states and organizations nationally and had encouraged that resolution.

## **VI. REPORT OF THE TREASURER:**

Mr. Edward Swaim referred to the Treasurer's Report in the Commissioners' packet. The total checking balance as of July 1, 2012, was \$14,576.07, and the Certificate of Deposit value was \$11,151.07.

Total expenses were low with a combined audit and meeting expense of \$1,001.00. Receipts from Member Assessments totaled \$2,200.00 and dividend income was \$1.52 for a checking balance of \$15,776.36. The Certificate of Deposit earned \$47.36 making that balance \$11,198.45. The TOTAL for both balances as of July 1, 2013 was \$26,974.81. He asked if there were questions - none followed. Commissioner Young made a motion to approve the Treasurer's Report and Mr. Bolourchi seconded. The motion carried unanimously.

## **VII. REPORT OF THE COMMISSIONERS:**

**OKLAHOMA** - Commissioner Strong presented the Commissioners' Report. He advised that farmers in the Southwest have been limited in planting cotton more than three years in a row due to the lack of water; the drought impacts agriculture alone by a couple of billion dollars. The Oklahoma Comprehensive Water Plan (OCWP) continues to be implemented through the Water for 2060 Advisory Council. This council consists of 15 members, appointed to develop recommendations aimed at stabilizing Oklahoma's water use through conservation and efficiency with effective incentives, outreach and educational tools.

The OCWP Instream Flow Workgroup will look at protection of non-consumptive needs (recreation, economic development, etc.) while operating under a prior appropriation system.

The Water Quality Project and Monitoring Report highlights: wrap-up of the comprehensive water plan; additional appropriations for surface water monitoring programs; and the first Comprehensive Ground Water Monitoring and Assessment Program.

Revisions to the Water Quality Standards included: revisions of the human health criteria. Commissioner Strong also discussed the Dam Safety Program and free inspections for low hazard dams, FEMA's Risk MAP programs, and flood-plain management activities. Three billion dollars have been put into water and sewer projects with a total estimated savings of more than one billion dollars to Oklahoma communities. The Water Infrastructure Credit Enhancement Reserve Fund allows municipalities and rural water/sewer districts to receive loans from the program at lower interest rates than conventional financing.

On June 13, 2013, the U.S. Supreme Court upheld Oklahoma laws controlling state water against a challenge from the Tarrant Regional Water District which serves a large area in north Texas.

Commissioner Dobbs stated he had nothing to add to the report; there were no questions. See Oklahoma's Commissioners' Report (Attachment 4).

**TEXAS** – Ms. Suzy Valentine (proxy for Commissioner Hyde) presented the Commissioners' Report.

**Drought Conditions:** Ms. Valentine advised that 66% of Texas is experiencing drought with 44% in severe drought conditions. The National Weather Service predicts long-term drought conditions to persist in many areas of the state, including the Red River Basin. She explained water right permits are based on priority doctrine or "first in time, first in right." In March, Governor Perry renewed his emergency proclamation for counties affected by the extreme drought conditions which pose a threat of imminent disaster. This proclamation includes 28 counties within Reach I of the Red River Basin.

**Drought Rulemaking:** A new section of the Texas Water Code required the Texas Commission on Environmental Quality (TCEQ) enact rules to define "drought" and "emergency shortage of water," to provide a process for the temporary suspension or adjustment of water rights during drought conditions. And establish procedures for drought-related notices, hearings, and appeals to the TCEQ. The "Drought Curtailment Rules," or Suspension or Adjustment of Water Rights during Drought or Emergency Water Shortage (30 Texas Administrative Code, Chapter 36), was adopted in 2012.

In June 2012, the Dow Chemical Company made a priority call on waters in the Brazos River Basin, and TCEQ restricted junior water rights in the basin with exceptions for municipal use and power generation. Texas Farm Bureau challenged the authority of TCEQ to make exceptions for certain user classes. These court cases remain active.

**Texas Watermaster Reviews:** The Watermaster Program is responsible for allocating, monitoring, and controlling the use of surface water in designated river basins. Currently, Texas has designated watermasters for the Rio Grande, the Concho River and the South Texas region (including the Guadalupe, Lavaca, Nueces and San Antonio river basins and coastal regions.) Every five years, TCEQ's Executive Director will assess the need for initiating a watermaster program in basins with no current watermaster. In 2015, the TCEQ will evaluate the Canadian, and Red river basins, and in 2016, the Sulphur and Cypress Creek river basins will be evaluated.

**Endangered Species Act (ESA) Litigation:** In 2011 a Federal lawsuit was filed by The Aransas Project (TAP) to compel the TCEQ to take appropriate steps to protect the wintering whooping crane from the potential negative impacts of water withdrawals from the Guadalupe and San Antonio River systems that could damage the whooping cranes' habitat in San Antonio Bay. In March 2013, the Court found in favor of the plaintiffs, TCEQ has appealed, but no decision has been issued. Depending upon the ruling, this case could either be headed back to the District Court, or for further appellate review, or potentially, to the U.S. Supreme Court.

**Groundwater Litigation:** In the Edwards Aquifer Authority (EAA) v. Day, lawsuit, the Court held that a landowner has absolute title to groundwater in place beneath the landowner's land, subject to the rule of capture and regulation by a groundwater conservation district, and that restricting the landowner's ability to pump groundwater could amount to a "taking" of private property. The EAA and the Day plaintiffs settled out of court so - the court did not make a determination and a regulatory threshold was not specified. Another groundwater lawsuit has resulted in a ruling that denying a request for a groundwater permit constituted a regulatory taking that required compensation to be paid to the property owner. Upon appeal, the case was remanded back to the trial court for valuation. It is still waiting to be decided or appealed further.

**Texas Water Plan:** The 2012 State Water Plan for Texas was developed by the Texas Water Development Board (TWDB). The Red River Basin was evaluated as one part of five regional planning groups that will submit proposals to the Texas Water Development Board for water management projects. Legislation for \$2 billion was passed in 2013 which enabled the State Water Implementation Revenue Fund for Texas (SWIRFT) and the State Water Implementation Fund for Texas (SWIFT). The Board is developing a state-level point system to prioritize projects and rules on how the funds will operate before they are distributed to rural water projects, conservation and reuse projects, and community and city projects. SWIFT funds will address small towns or large metropolitan areas to develop drought-proof water supplies. At least 20% of SWIFT funds must be for conservation and reuse projects and 10% must go to projects for rural communities and farmers. See Texas' Commissioners' Report (Attachment 5).

**LOUISIANA** – Mr. Bo Bolourchi (proxy for Commissioner Knotts) presented the Commissioners' Report.

### **Status of Stream Flows at AR/LA Stateline with Relation to the Specifications of the Red River Compact**

As a follow up to its report at the 2013 meeting in New Orleans, the Louisiana contingent of the Compact Commission continues to be concerned with deficient stream flows on some streams at the state line. The portion of the Compact dealing with Reach IV- Arkansas and Louisiana, (specifically Sections 7.02 and 7.03) defines the stream flows at the state line. There is also a general requirement of 40% of the weekly natural runoff in Arkansas for streams crossing the state line.

In 2013, Ouachita River, Boeuf River, and Bayou Macon flow across the state line met the Compact requirement, with only a few days of insufficiency. However, the number of days when flow of Bayou Bartholomew is less than 80 cubic feet per second (CFS) has been increasing since about year 2000. The 80 CFS requirement has been satisfied about 80% of the time. In 2010, there were 201 days with flow less than 80 CFS.

The Louisiana contingent continues to be concerned about deficient flow conditions of the streams in Reach IV, for which a weekly minimum flow is specified in the Compact. These

streams are Ouachita River, Boeuf River, Bayou Bartholomew, and Bayou Macon. Of the four streams mentioned, Boeuf River continues to be the greatest concern.

The Louisiana contingent continues to be concerned that future demands for water are likely to produce even more serious flow deficiencies at the state line. They requested that Arkansas implement effective and real-time withdrawal control measures to provide the “equitable apportionment of such waters” at the state line, as is stated in the Preamble to the Red River Compact. See Louisiana’s Commissioners’ Report (Attachment 6).

**ARKANSAS** – Commissioner Young presented the Commissioners’ Report.

**Arkansas Water Plan Update:** Commissioner Young advised that Mr. Edward Swaim has been managing the Arkansas Water Plan Update. It is on time and within budget. The water supply and availability issues have been addressed. There was concentrated effort to bring the public into the process. The target date of completion is November 2014.

**Nonpoint Source (NPS) Pollution Management Program:** The Environmental Protection Agency instituted changes in the NPS Program nationally in 2014. The Arkansas Natural Resources Commission (ANRC) modifications were submitted to EPA in December 2013. ANRC identified ten priority watersheds utilizing a Risk Assessment matrix; those watersheds include: Bayou Bartholomew, Lower Ouachita – Smackover and Upper Saline.

Commissioner Dowd advised that the future of the Red River navigation project is bleak. The Army Corps of Engineers (USACE) was slow to act, prompting the Arkansas legislature to withdraw necessary monies before the study was completed. There is no operating budget; the project subsists on a limited budget from the ANRC.

**Groundwater Program Summary:** Commissioner Young advised that a comprehensive groundwater effort was initiated with the USGS to develop a report on the aquifers of Arkansas as part of the Arkansas Water Plan Update. This study will provide groundwater quality, quantity, use sustainability, and policy information.

**Red River Navigation Study:** There are four alternatives being evaluated by the Army Corps of Engineers, Vicksburg District, and current “freight rates” are being reevaluated to update a benefit-cost ratio. The Red River Commission is working to show positive benefit-cost ratio alternatives.

**Compact Compliance:** An additional streamflow gage was installed into the Boeuf River upstream of an existing gage to provide information in the heart of the diversions to track changes as they occur. Arkansas and Louisiana are working to assess runoff, flows, and water use in interstate streams in Southeast Arkansas. With the urging of the Commissioners from Louisiana, the staff at ANRC has researched the large reservoir at the state line on the Boeuf River. The staff will visit this reservoir and the weirs and gages once the flow decreases. Commissioner Young requested Mr. Swaim to invite Louisiana representatives if a tour of the area is scheduled.

Commissioner Theis asked if a detailed study was completed by the USACE for the Bayou Macon, and Mr. Ken Brazil advised that he was not aware of any written report.

**Southeast Arkansas Boeuf-Tensas Feasibility Study:** Commissioner Young advised that the Louisiana Department of Agriculture and Forestry agreed to become a “non-federal sponsor” in the Southeast Arkansas Boeuf-Tensas Feasibility Study.

ANRC Commissioner Ann Cash and Mr. Gene Sullivan advised that the District and Representatives of Louisiana will each contribute \$150,000 to further a USACE feasibility study.

**National Flood Insurance Program (NFIP):** Commissioner Young advised that ANRC is the State Coordinating Agency for NFIP and maintains a database for 65 counties with 353 cities and towns participating. Each participating community has a local floodplain administrator that attends an eight-hour training class yearly.

**Safe Dams Program:** There are approximately 129 permitted dams in the Red River Compact area of the total 1,337 dams in ANRC’s database. The State regulates 409 dams, Federal agencies regulate 60 dams, and the remaining dams do not meet size or hazard criteria for regulation. See Arkansas’ Commissioners’ Report (Attachment 7).

## **VIII. REPORT OF THE COMMITTEES:**

Discussion followed relating to the Commission meeting dates (the last Tuesday of April) per the rules. Chairman Fassett advised that the meetings in spring did not always line up with availability of meeting sites.

**Budget:** Mr. Edward Swaim presented the Budget Committee recommendations for 2015. The Committee proposed that the budget be changed to combine the Meeting Expenses with Printing and Reports category for a total of \$5,000. The increase would be accomplished by lowering Contingency from \$20,000 to \$16,000. It was suggested an audit expense be eliminated by utilizing a CPA in the ANRC office. The State Assessment is to continue at \$550 per year.

Commissioner Abney made a motion to continue with an independent auditor and asked the Legal Committee to look at the rules with the Budget Committee. Commissioner Young seconded the motion. The motion carried unanimously.

Commissioner Abney made a motion to approve the proposed 2015 Budget with “Audit”, under Meeting Expenses. Commissioner Strong seconded the motion. The motion carried unanimously.

**Legal:** Mrs. Crystal Phelps advised that Texas found several interpretations of the rules and the Legal Committee would like to make one version to be published in next year’s report.

Commissioner Strong made a motion to direct the Legal Committee to clean up the internal rules, and Commissioner Young seconded the motion. The motion carried unanimously.

Commissioner Abney requested that the Legal Committee determine if updates are necessary at the same time that they make one version of the rules.

**Engineering Committee:** Mr. Brazil reported that the Committee was reviewing updates to drainage delineations for Sub-basin 1 of Reach I.

Commissioner Abney asked for a status report of progress since the 2013 Compact meeting. Mr. Brazil advised that Oklahoma USGS had published revised drainage areas; but that Texas had not published their updates yet. As soon as that is done the revised rules will be assembled and any changes to the drainage areas will be incorporated.

Mr. Brazil advised that the Committee was to present a Resolution on Gages. The 2013 Report is being produced by Louisiana, and each host state will make copies.

Discussion followed: Oklahoma will update the Compact website, and the states are to provide Oklahoma with links to their individual sites. Arkansas agreed to look at individual basins and complete studies on Reach IV, Sub-basin 2.

Commissioner Strong made a motion to approve the USGS Gage Resolution (Attachment 8), and Commissioner Dowd seconded the motion. The motion carried unanimously.

### **Environmental and Natural Resources Committee**

Ms. Valentine reported that Texas' Integrated Report for the Clean Water Act Sections 305(b) and 303(d) on the status of state surface waters was approved by the Environmental Protection Agency (EPA) in 2012. A new version will be produced after approval from the EPA in 2014. The number of impairments decreased in 2012 as compared to 2010. A project under Texas' Clean Rivers Program is continuing in an effort to improve water quality of Buck Creek, located on the Lower Prairie Dog Town Fork of the Red River.

The presence of live zebra mussels has now been confirmed in six Texas water bodies; Lakes Texoma, Ray Roberts, Lewisville, Bridgeport, Belton, and Lavon. In the state's ongoing effort to combat the spread of invasive zebra mussels, new rules requiring that all boats operating on public water in 17 Northeast Texas counties be drained after use were issued by the TPWD in December 2013. Under the new regulations, persons leaving or approaching public water in the affected counties are required to drain all water from their vessels and on-board receptacles.

## **IX. FEDERAL AGENCY REPORTS:**

**U.S. Army Corps of Engineers:** Not Present.

**U.S. Bureau of Reclamation:** Written Report Only.

It was noted that the federal agency partners, USACE and U.S. Bureau of Reclamation were absent. Chairman Fassett stated he would make an extra effort to invite them for the next Commission meeting.

**U. S. Geological Survey:** Jason Lewis of Oklahoma said there were no changes to report. Jaysson Funkhouser of Arkansas advised that a new gage was installed on the Boeuf River.

Ben McGee of Louisiana thanked the Arkansas USGS for their work on the cooperative stream gaging program. He stated they are excited over the Boeuf River work.

**X. Discussion Topics:** The Farm Bill was reauthorized, and a handout was provided with more details (Attachment 9). Funding is stronger as programs have converged and regional programs were rolled into partnerships. The Environmental Quality Incentives Program (EQIP) will fund the Farm Bill over the next five years. Sixty percent of the money must be spent on livestock; five percent will address wildlife; and priority is given to farmers, ranchers, and veterans.

Rich Brontoli reported for the Red River Valley Association that there was no dredging since there has been a drought and lock service mandates were reduced. Two major companies (Adler and Cool Planet) have taken over the Red River Chloride Control Project which was not included in the President's budget for 2015. He warned that the Giant Salvinia plant, an invasive fern from Brazil, is flourishing in the South's lakes. The states will suffer as it takes over the lakes, since carp will not eat it, and it causes oxygen depletion and fish kills.

## **XI. NEW BUSINESS:**

Mr. Bolourchi introduced Louisiana's new attorney, Brandon Brown. Mr. Brown requested that an accounting of the flows of Reach IV be made.

Commissioner Strong asked if there are compliance rules to calculate weekly runoff.

Mr. Brown advised that they are unable to reach an agreement on how to quantify flow. The Compact gives a mechanism to request; the engineers need to find an agreement on compliance. The Engineering Committee needs the Commission to request an evaluation of the situation and recommendation as well as a date by which this will be accomplished.

Commissioner Young stated that in 2011, the Commission proposed rules to address the need. In 2013 the Commission nullified the proposal at the request of Louisiana.

Commissioner Strong stated a procedure needed to be developed to calculate compliance.

Commissioner Abney asked what Louisiana was asking for that had not already been done.

Mr. Bolourchi advised that Louisiana and Arkansas had tried to develop the process to determine compliance but did not have experience. He asked for assistance from Texas and Oklahoma.

Commissioner Young made a motion to assign the Engineering Committee to hold a telephonic meeting and report back to the Commission within 90 days. They are to provide a recommendation on how to accomplish the task and on how long it will take. Commissioner Strong seconded the motion.

Discussion followed: regarding the time frame needed for the Committee to evaluate the situation. It was stated 90 days may be too short to develop a process. Therefore, the question was raised if it was possible for the rules and regulations to be modified in pieces.

Chairman Fassett advised that since the Commission does not meet monthly, he would accept a provisional approach.

Chairman Fassett stated they would start from scratch projecting how much water and how to calculate.

Commissioner Abney agreed it was a good idea, to allow the Engineering Committee to devise how to do it.

There being no further discussion the motion carried unanimously.

### **Committee Meetings – Annual Report Commission Assignments to Committees**

Elections of Officers – Chairman Fassett advised that Oklahoma is to Host in 2015. Commissioner Abney nominated J. D. Strong, Vice Chairman; Mary Schooley, Secretary; and Edward Swaim, Treasurer.

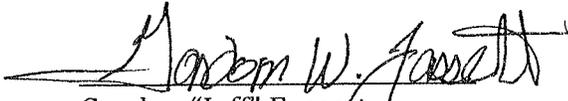
Commissioner Young seconded the nominations. There being no further nominations the officers were elected.

Commissioner Abney requested that the meeting date (usually 4<sup>th</sup> Tuesday in April), be announced early.

XII. Red River Valley Association - see item X. Discussion Topics.

XIII. Public Comment – There was no response.

There being no further business, the meeting was adjourned at noon.

  
Gordon "Jeff" Fassett  
Federal Commissioner & Chairman  
Red River Compact Commission

April 28, 2015  
Date

  
Laura A. Brown  
Arkansas Natural Resources Commission  
2014 Commission Secretary

April 28, 2015  
Date



**PROXY**

**RED RIVER COMPACT COMMISSION**

THIS IS TO CERTIFY that I have designated and do hereby authorize MR. ZAHIR "BO" BOLOURCHI, Director of Water Resources Programs, Public Works & Water Resources Division to serve as my proxy for the Red River Compact Commission meetings and any committee meetings held in connection with the Red River Compact Commission, with full authority to act on my behalf as a voting member of the Commission.

SIGNED at Baton Rouge, Louisiana, this 8<sup>th</sup> day of April, 2014.

  
CHRISTOPHER P. KNOTTS, P.E.  
CHIEF, PUBLIC WORKS & WATER RESOURCES DIVISION  
LOUISIANA COMMISSIONER, RRCC

Bryan W. Shaw, Ph.D., P.E., *Chairman*  
Toby Baker, *Commissioner*  
Zak Covar, *Commissioner*  
Richard A. Hyde, P.E., *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

March 3, 2014

Mr. Gordon W. "Jeff" Fassett  
Chairman and Federal Representative  
Red River Compact Commission  
Fassett Consulting LLC  
1720 Carey Avenue, Suite 612  
Cheyenne, Wyoming 82001

Dear Chairman Fassett:

I regret that I am unable to participate in the 2014 annual meeting of the Red River Compact Commission on April 21, 2014, in Hot Springs, Arkansas, due to previous commitments. In my absence, I grant my support and proxy vote as Commissioner of the Compact Commission, for any considerations of the Commission to Suzy Valentine, P.E., Interstate River Compacts Engineer Advisor, and representative from Texas.

My best wishes to the Commission for a successful meeting. I look forward to working with you on future Commission issues.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard A. Hyde".

Richard A. Hyde, P.E., Executive Director  
Texas Commission on Environmental Quality  
Commissioner, Red River Compact Commission

cc: Suzy Valentine, P.E., Interstate River Compacts Engineer Advisor  
William A. Abney, Commissioner, Red River Compact Commission

**MEETING SIGN-IN SHEET**

Project: Red River Compact Commission Meeting  
 Facilitator: State of Arkansas

Meeting Date: April 22, 2014

Place/Room: Embassy Suites - Hot Springs, AR

NAME	REPRESENTING	PHONE	MAILING ADDRESS	E-MAIL
Bill Abney	Texas Comm.	903-938-6611	PO BOX 1386 Mars 4911 TX 75672	wabney@agneywinnick.com
Suzey Valentine	Texas Comm.	512-239-4730	P.O. Box 13087 MC-100 Austin TX 78711	Suzey.valentine@teej.texas.gov
Wayne Dowd	ARK	870-577-2323	12 No. Hillis Pl. Texarkana, ARK	Cwd@cablrome.net
Raudy Young	AR	501-682-3961	101 East Capitol Little Rock, AR	raudy.young@arkans.gov
Jeff Fassett	RRCC-Chri	301-778-9500	1720 Coker Ave. Cheyenne, WY 82001	Jeff.Fassett@haine.com
Bo Bolourchi	LA	225-379-3009	P.O. Box 94245 B.R., LA. 70204	bo.bolourchi@la.gov
ART THEIS	LA	225-810-0555	688 S. Loko Row Dixie Range LA 70810	ARTTHEIS@cox.net
J.D. Strong	OK	405/530-8800	3800 N. Classen Blvd. OKC, OK 73118	jd.strong@courts.ok.gov
Charles Dobbs	OK	500-481-0301	PO Box 1148 AUSTIN OK 73522	Charlesdobbs@sbcglobal.net

# MEETING SIGN-IN SHEET

Project: Red River Compact Commission Meeting  
 Facilitator: State of Arkansas

Meeting Date: April 22, 2014

Place/Room: Embassy Suites - Hot Springs, AR

NAME	REPRESENTING	PHONE	MAILING ADDRESS	E-MAIL
Tom Buchanan	ALFUS FC			
Rick Brantoli	REVA			redriver@katonil.com
Randy Williams	NEWS			
Jason Lewis	USGS			jmlewis@usgs.gov
Eric Brinkman	AGFC			elbrinkman@agfc.state.ar.us
Walt Sears	NETMID			netmud@aol.com
David Harkins	RPS			david.harkins@rpsgroup.com
Jerry Barnett	OWRB			Jerry.Barnett@owrb.ok.gov
Ken Niece	USGS			kniece@usgs.gov
Alice Cash	Boeing Jensen Arbuckle.com			cash.aren@boeing.com
Crystal Phelps	ANRC			crystal.phelps@arkansas.gov
Ed Knight	LA DOTD			edward.knight@la.gov
Edward Swann	ASAC			EDWARD.SWANN@AR.gov





Report of the Treasurer  
July 1, 2012 – June 30, 2013  
Red River Compact Commission  
April 22, 2014

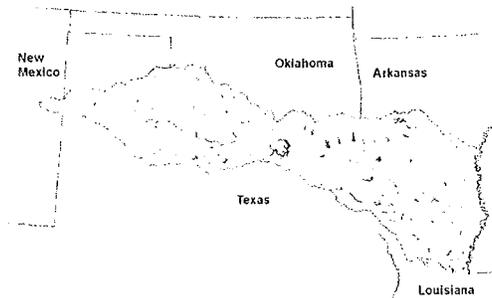
<b>Bank Balance as of 7/1/2012</b>	<b>\$14,576.07</b>
<b>RECEIPTS</b>	
Member Assessments	\$2,200.00
Dividend Income	\$ <u>1.52</u>
<b>TOTAL</b>	<b>\$2,201.52</b>
<b>EXPENSES</b>	
Audit	275.00
Meeting Expense	<u>726.01</u>
<b>TOTAL</b>	<b>\$ 1001.00</b>
<b>Bank Balance as of 7/1/2013</b>	<b><u>\$15,776.36</u></b>
<b>Certificate of Deposit Balance as of 7/1/2012</b>	<b>\$11,151.09</b>
<b>RECEIPTS</b>	
Dividend Income	\$ 47.36
<b>Certificate of Deposit Balance as of 7/1/2013</b>	<b><u>\$11,198.45</u></b>
<b>TOTAL BALANCE 7/1/2013</b>	<b><u>\$26,974.81</u></b>

**Red River Compact Commission**  
**Statements of Cash Receipts and Disbursements**  
**For the Period July 1, 2012 through June 30, 2013**

Cash in bank, checking as of July 1, 2012	\$	<u>14,576</u>
Cash Receipts		
Member Assessments		2,200
Interest Income - checking		<u>1</u>
Total Cash Receipts	\$	<u>2,201</u>
Cash Disbursements		
Audit Fee		<u>1,001</u>
Total Cash Disbursements	\$	<u>1,001</u>
Cash in bank, checking as of June 30, 2013	\$	<u>15,776</u>
Cash in certificate of deposit as of July 31, 2012	\$	11,151
Interest Income - certificate of deposit		48
Cash in certificate of deposit as of June 30, 2013		<u>11,199</u>
Cash and cash equivalents as of June 30, 2013	\$	<u><u>26,975</u></u>

# OKLAHOMA COMMISSIONERS' REPORT

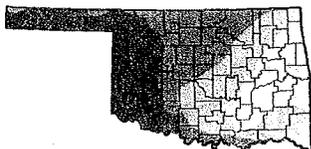
Red River Compact Commission  
 Hot Springs, Arkansas  
 April 22, 2014



## CLIMATE

The western extent of the Red River Compact region in Oklahoma has been hit especially hard by the ongoing drought, now entering its fourth year. Much of the area is categorized in the worst "exceptional" drought category, according to the U.S. Drought Monitor. During the past 365 days, the Southwest climate division has received less than 21 inches of precipitation (68 percent of normal rainfall). The South Central climate division has received about 34 inches of rainfall during that period (68 percent of normal). In contrast, the adjacent Southeast region has received almost 47 inches of rainfall (92 percent of normal).

U.S. Drought Monitor  
 Oklahoma



April 15, 2014  
 (Released Thursday, Apr. 17, 2014)  
 Valid 6 a.m. EDT

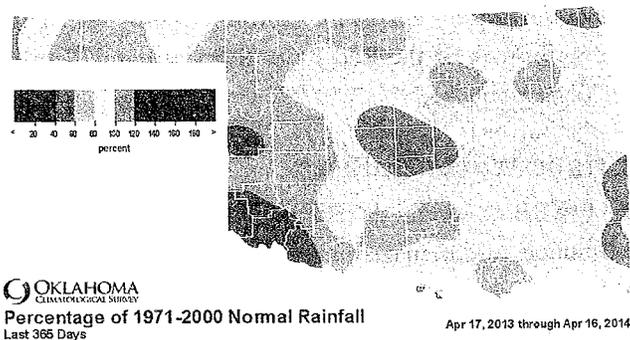
	Drought Conditions (Percent Area)				
	12/29	02-01	03-01	04-01	04-15
Current	0.73	0.27	71.56	54.81	25.51
Least Worst Category	1.30	0.04	70.44	52.03	20.10
2 Month Ago Percent	35.17	61.43	30.04	18.05	4.14
3 Month Ago Percent	52.64	43.16	30.17	32.00	4.84
Water Year Percent	21.14	71.25	43.00	17.02	4.42
One Year Ago Percent	6.00	31.91	81.91	52.11	33.47

**Legend:**  
 D0: No Drought  
 D1: Mild Drought  
 D2: Moderate Drought  
 D3: Severe Drought  
 D4: Extreme Drought  
 D5: Exceptional Drought

The Drought Monitor features an 800-state threshold, and conditions may vary by sub-grid cell or by county.

**Author:**  
 Brian Bolch  
 National Drought Mitigation Center

**USDA**  
 National Drought Mitigation Center  
<http://droughtmonitor.unl.edu/>



OKLAHOMA  
 CLIMATOLOGICAL SURVEY  
 Percentage of 1971-2000 Normal Rainfall  
 Last 365 Days

Apr 17, 2013 through Apr 16, 2014

## OKLAHOMA COMPREHENSIVE WATER PLAN

Considerable progress was made during 2013 toward implementing at least half of the priority recommendations included in the 2012 Update of the Oklahoma Comprehensive Water Plan (OCWP), including Water Quality and Quantity Monitoring; Water Supply Reliability; Water Conservation, Efficiency, Recycling and Reuse; and Water Project and Infrastructure Funding. The OWRB has enhanced and expanded water monitoring activities and hydrologic studies and revitalized financing of water and wastewater projects to meet the anticipated \$82 billion dollar need. In addition, the OWRB and contractors have facilitated initial meetings of the Water for 2060 Advisory Council and Instream Flow Advisory Group.

### Water for 2060 Advisory Council

The OCWP Water for 2060 Advisory Council, a 15-member group appointed to develop recommendations aimed at stabilizing Oklahoma's water use through improved conservation and efficiency, held its first two meetings in 2013. Focusing on the most effective incentives and educational tools, the Council was afforded a unique opportunity to interact with selected public water supply representatives and learn about efficiency practices already in place in communities and rural water systems. The Council's final report of findings and recommendations will be submitted to the Governor, Speaker of the House, and President Pro Tempore by late 2015.

## **OCWP Instream Flow Workgroup**

The OCWP Instream Flow Workgroup met three times during 2013. Discussion primarily centered on a potential pilot study that would incorporate a process for evaluating economic and environmental impacts that could result from establishment of instream flow requirements in Oklahoma. The Workgroup—commissioned during the OCWP update process to conduct an independent technical, legal, and policy analysis of a potential instream flow program in Oklahoma—is crafting recommendations for the most efficient, feasible method for balancing the water needs of consumptive users with those that rely upon water flowing in streams and lakes for economic development and recreation.

## **WATER RESOURCES STUDIES**

Hydrologic studies, another primary initiative of the OCWP, are ongoing throughout the state. The Rush Springs Aquifer Study was initiated in 2011-12 in conjunction with a hydrologic investigation and stream water allocation model of the Upper Washita River Basin. The OWRB is initiating required 20-year updates of hydrologic studies for the Enid Isolated Terrace and Elk City Sandstone aquifers and are anticipating their completion in late 2014 and mid-year 2015, respectively. Under contract with the USGS, the OWRB will conduct a 20-year update of the groundwater study for the North Canadian River Alluvium and Terrace Groundwater Basin from the Beaver-Harper County line to Lake Overholser at the Canadian-Oklahoma County line. The USGS has also been contracted to conduct a 20-year update on the North Fork of the Red River Alluvium and Terrace aquifer and an investigation on the Canadian River Alluvium and Terrace aquifer.

### **Surface Water Studies**

The OWRB continues developing stream water allocation models as a supporting tool for the appropriation, allocation, distribution, and management of stream water in the state of Oklahoma. The program recently contracted with AMEC for the development of the following systems: Verdigris River (OWRB 2-13, 2-14, 2-15-1, 2-15-2); Red River (OWRB 1-15-1, 1-15-2, 1-16, 1-18); and North Canadian River (OWRB 2-3, 2-5-1, 2-5-2, 2-5-3, 2-5-4, 2-9-4). Three models are currently being developed in-house, including the Washita River (OWRB 1-8-4, 1-8-3, 1-8-2), which is part of a cooperative study with the Bureau of Reclamation, and two additional models for Walnut Bayou and Mud Creek basins. Updates of three previously built models in south east Oklahoma are also under progress. These ongoing projects are expected to be completed by the end of FY2014, taking the stream water allocation program to its 70% completion, with a total of 30 basins modeled in the State, and the capability of assisting nearly 2,295 existing surface water rights.

### **Groundwater Studies**

The Garber-Wellington Water Management Study was initiated in June 2008 to address growing concerns about the future of water availability in central Oklahoma. The study was completed and a USGS Scientific Investigations Report has been published entitled “Hydrology and simulation of groundwater flow in the Central Oklahoma (Garber-Wellington) Aquifer, Oklahoma, 1987 to 2009, and simulation of available water in storage, 2010-2059.” While the OWRB will use information obtained from the investigation to determine the Maximum Annual Yield of the aquifer, the groundwater-flow model will also be used to anticipate the impacts of long-term groundwater withdrawals on the aquifer as well as simulate water management strategies. The study was funded with state monies through the Oklahoma Comprehensive Water Plan and federal funds through the Bureau of Reclamation and U.S. Geological Survey.

The OWRB initiated a study on the Rush Springs aquifer in west-central Oklahoma in October 2011 and will be collecting groundwater and surface water information to better understand the groundwater-flow system. The major goals of the project are to 1) better define the aquifer properties and boundaries; 2) develop a groundwater-flow model to simulate the flow system; and 3) determine the Maximum Annual Yield of the aquifer. The groundwater-flow model will be used to simulate water management scenarios, project current use impacts, and assess climate variability utilizing

available climate modeling information. The OWRB will be working with the Bureau of Reclamation as part of the WaterSMART Program as part of the Bureau's Washita Basin River Basin Water Supply Study. The project is scheduled to be complete by the end of 2015.

The OWRB entered into a cooperative agreement with the USGS to fund a 20-year Maximum Annual Yield update on the North Canadian River Alluvium and Terrace Groundwater Basin Reach I and II. The objective of this project is to update the 1981 (Reach I) and 1983 (Reach II) hydrologic survey from the Oklahoma Panhandle to Lake Overholser and to develop new groundwater-flow models that will be used to simulate the effects of groundwater withdrawals. The simulations will be used to evaluate the allocation of water rights within the groundwater basin. Initially a two-year project, the project was extended one year due to the amount of additional data required to complete the project. The three-year project will be completed by the end of 2014. Similar agreements have been made with the USGS to complete work on the 20 year update of the North Fork of the Red River alluvium and terrace, to be finished by the end of 2015, as well as the Canadian River alluvium and terrace, to be completed by the end of 2016.

### **Arbuckle-Simpson Maximum Annual Yield**

The nine-member OWRB Board approved the Final Order for the Arbuckle-Simpson Maximum Annual Yield (MAY) in October. The long-awaited decision was prompted by a 2003 law change and informed by more than a decade of study, numerous public meetings with citizens and stakeholders, and a meticulous hearing process. The new MAY sets a 0.2 acre-feet per acre per year (AFY) equal proportionate share (EPS) withdrawal rate for the Arbuckle-Simpson aquifer.

## **WATER QUALITY PROJECTS & MONITORING**

OWRB staff continue to work cooperatively with the Central Oklahoma Master Conservancy District (COMCD) to monitor and improve water quality in Lake Thunderbird where a new oxygenation system—SDOX—was implemented to improve raw water quality for drinking water customers. Operation of the in-lake BMP has reversed the long term eutrophication trend during the three years it has been in operation. In addition, work continues to determine the impact of in-lake BMP implementation on addressing eutrophication in two Oklahoma City water supply lakes, both designated as impaired by the OWQS.

Ongoing lake vegetation projects include the establishment of floating wetland plants at Hobart City Lake in cooperation with the ODWC and City of Hobart as well as a collaborative effort to establish native aquatic plants along the shoreline of Ft. Cobb Lake. Spread and growth of native plants serve as an inexpensive, yet innovative, method to combat erosion and suspended sediment, reduce nutrients, and provide valuable habitat for birds, fish, and aquatic insects. The OWRB also works to educate lake managers on the many benefits of establishing aquatic plants. OWRB staff also mapped the extent that Hydrilla, an exotic aquatic plant known to impair recreational activities throughout the southeast United States, has invaded the waters of Lake Murray.

The OWRB continues its participation within the Oklahoma Wetland program to develop beneficial uses for wetlands as well as better define the number and quality of oxbow lakes. The OWRB began work on the National Rivers and Streams Assessment Study and just completed the first year of sampling with year two sampling beginning in the summer of 2014. Sampling on numerous rivers and streams across Oklahoma provides data to assess environmental integrity of waters.

Through an ongoing successful partnership with the Grand River Dam Authority, the OWRB continued dissolved oxygen monitoring on Grand, W.R. Holway and Hudson Lakes to support Federal Energy Regulatory Commission (FERC) relicensing.

The OWRB's groundwater monitoring team assessed Swine Licensed Managed Feeding Operations compliance in an additional 550 wells through a continuing partnership with the Oklahoma Department of Agriculture, Food and

Forestry (ODAFF). Staff also acquired a wealth of historical groundwater quality data—now available to the public—to support the Garber-Wellington aquifer study.

Additional OWRB water quality projects include:

- Probabilistic biological monitoring to assess stream ecosystem integrity throughout Oklahoma;
- Confirmatory stream and reservoir monitoring to assess Water Quality Standards beneficial use attainment status;
- Monitoring for the Grand River Dam Authority to assist GRDA in management of their reservoirs for ecosystem support;
- Completing cooperative work for ODAFF to investigate pesticides in certain Oklahoma streams.

### **Groundwater Monitoring and Assessment Program (GMAP)**

Initial water well sampling through the new Groundwater Mapping and Assessment Program (GMAP)—Oklahoma’s first holistic groundwater monitoring program, which resulted from a priority recommendation of the OCWP—began in August 2013 and the first round of sampling has been completed. A report detailing the results from the first year of sampling will be available in May 2014.

Long-term collection of data will provide invaluable information on the ambient quality and quantity of Oklahoma’s groundwater resources, vastly improving the detection of impairments as well as the understanding of seasonal, climatic, and usage patterns. As many as 2,000 wells will eventually comprise the monitoring network with coverage of every major aquifer in the state.

### **Beneficial Use Monitoring Program**

The Beneficial Use Monitoring Program (BUMP), which provides surface water quality data crucial to the establishment of fair and defensible Water Quality Standards, was expanded in 2013 to include 130 lakes and 103 stream sites, including selected United States Geological Survey (USGS) sites and other gages located strategically to characterize each of the 82 OCWP planning basins.

## **OKLAHOMA WATER QUALITY STANDARDS**

OWRB Water Quality staff continue to refine and improve Oklahoma’s Water Quality Standards. Revisions, which were recently adopted by the state and approved by EPA, include upgrading the recreation beneficial use of the Canadian River in the Oklahoma City metropolitan area to Primary Body Contact Recreation and segments of Wewoka and Rush Creeks to Warm Water Aquatic Community. Many of the human health criteria in Appendix G of the standards were revised with calculations using up-to-date guidance, scientific information and the current recommended EPA fish consumption rate.

### **DAM SAFETY PROGRAM**

In 2013, the OWRB introduced a free inspection program for low hazard-potential dams in Oklahoma. In addition, inspection and maintenance training was conducted for private and municipal dam owners and breach inundation maps were developed for 15 high hazard-potential dams, provided to dam owners at no cost, and integrated into site-specific Emergency Action Plans to assist emergency managers in the event of dam failure.

### **FLOODPLAIN MANAGEMENT**

The OWRB continues to participate in FEMA’s RiskMAP program, an innovative approach to fostering working partnerships between FEMA and participating National Flood Insurance Program (NFIP) communities, regional

agencies, state agencies, tribes, and universities in identifying and communicating risk throughout local watersheds. To date, the OWRB has initiated seven FEMA RiskMAP Discovery projects throughout Oklahoma. The OWRB continues to train and accredit floodplain administrators in Oklahoma's 396 participating NFIP member communities.

## WATER RESOURCES FINANCING

The OWRB administers the State Financial Assistance Program (FAP), backed by the Statewide Water Development Revolving Fund, which awards loans and grants for the construction and improvement of water and sewer facilities. In all, through the OWRB's five loan and grant programs, more than \$3 billion in financing has been provided for water and sewer projects in Oklahoma with a total estimated savings of more than \$1 billion to Oklahoma communities.

PROGRAM	NUMBER AND AMOUNT
FAP Loans	360 for \$901,465,000
CWSRF Loans	280 for \$1,232,479,409
DWSRF Loans	164 for \$868,303,300
REAP Grants	604 for \$51,969,016
Emergency Grants	566 for \$33,776,351
Drought Response Grants	6 for \$418,848
<b>TOTAL</b>	<b>1,981 for \$3,088,411,924</b>

The new Water Infrastructure Credit Enhancement Reserve Fund (SQ764)—a \$300 million pledge of credit from the state enabled through an OCWP priority recommendation and subsequent passage of State Question 764—was instrumental in Standard and Poor's rating upgrade to AAA of the State Revenue Bond Loan Program. The upgrade allows municipalities and rural water/sewer districts to receive loans from the program at lower interest rates than what they could receive through conventional financing.

## OKLAHOMA STATE LEGISLATURE

The State Legislature convened on February 3. Of more than 2,200 new pieces of legislation filed this year, OWRB staff are reviewing about 60 as well as watching measures that carried over from the previous session. Currently filed bills address such issues as water reuse and potential consolidation of the OWRB with the Oklahoma Department of Environmental Quality.

## LEGAL MATTERS

### Tarrant Regional Water District v. Herrmann

On June 13, 2013, Oklahoma won a historic legal victory in the case of Tarrant Regional Water District v. Herrmann when the U.S. Supreme Court unanimously upheld certain Oklahoma laws controlling state water against a challenge from the Tarrant Regional Water District, which serves a large area in north Texas. In 2007, Tarrant applied for a permit to take water from the Kiamichi River in southeastern Oklahoma and simultaneously filed a federal lawsuit against OWRB members. Tarrant challenged the legality of several Oklahoma statutes that place restrictions on the use of stream water out-of-state. After Oklahoma's legal team had won victories in U.S. District Court and again in the Court of Appeals, the Supreme Court definitively ruled that Tarrant has no right to cross the state border and take water from Oklahoma because (1) Oklahoma laws are within the state's authority and rights to control its waters under the Red River Compact, and (2) Oklahoma laws are not contrary to the Commerce Clause of the U.S. Constitution.

### Chickasaw and Choctaw Nations v. Gov. Fallin, OWRB, and Oklahoma City

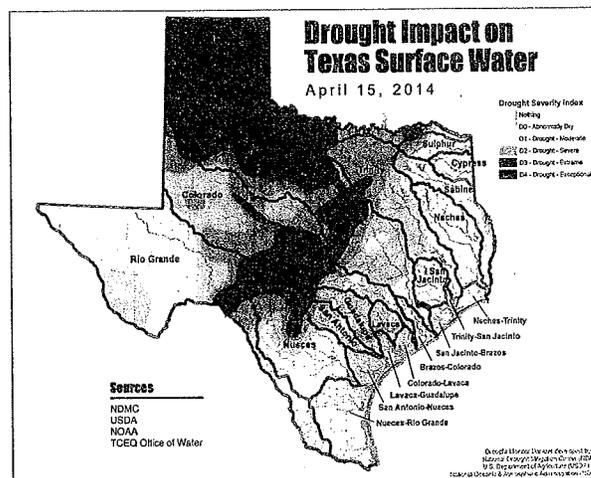
On August 18, 2011, the Chickasaw Nation and Choctaw Nation of Oklahoma filed a lawsuit in the U.S. District Court for the Western District of Oklahoma. The lawsuit names as defendants Gov. Mary Fallin, the members and Executive Director of the OWRB, the City of Oklahoma City and the Oklahoma City Water Utility Trust (OCWUT). The lawsuit alleges the Indian Nations have federally-protected rights to the water within a 22-county territory in southeastern Oklahoma. Among other things, the lawsuit seeks (1) declaratory judgments against any action by the OWRB on <sup>31</sup>

pending application by Oklahoma City and OCWUT for a permit to use stream water from Sardis Reservoir in southeastern Oklahoma, or any other withdrawal or export of water from the area at issue, unless and until there is initiated a general stream adjudication that satisfies the requirements of the federal law known as the McCarran Amendment; and (2) permanent injunctions against any such action unless and until a general stream adjudication that satisfies the McCarran Amendment is completed. On February 10, 2012, the Oklahoma Attorney General filed on behalf of the OWRB to initiate such McCarran Amendment adjudication proceedings to protect and accurately determine all rights to the use of water in the Kiamichi, Clear Boggy, and Muddy Boggy stream systems and moved to dismiss the Tribes' federal court action as a premature effort to have federal courts usurp Oklahoma's management of waters of the State. However, on March 12, 2012, the United States filed a Notice of Removal with the federal district court in Oklahoma City. Since that time, a joint motion to stay proceedings has been granted for both cases (Chickasaw Nation and Choctaw Nation v. Fallin and OWRB v. United States) and has been renewed on a continual basis to allow further efforts in mediation. The stay currently has been extended until May 15, 2014.

## Red River Compact Commission Texas Commissioners' Report April 22, 2014

### Drought Conditions

Although rains in 2013 resulted in some improvement, as of April 15, 2014, the United States Drought Monitor continues to show more than 66% of Texas in some level of drought conditions, with much of the extreme drought conditions occurring in the Panhandle and north Texas region including the upper reaches of the Red River Basin. About 44% of the state remains in severe drought conditions. The NOAA Climate Prediction Center's Seasonal Drought Outlook is predicting that the long-term drought conditions will persist in many areas of the state, including the Red River Basin.



In Texas, enforcement of surface water right permits is guided by the priority doctrine, or “first in time, first in right.” Domestic and livestock users have superior rights to any permitted surface water right holders. Between permitted water right holders, “senior” permit holders that received their authorization first are entitled to receive their water before the “junior” water right holders that received their authorization later. If a water right holder is not getting water they are entitled to, they can call upon the Texas Commission on Environmental Quality (TCEQ) to take action to enforce the priority doctrine – a priority or senior call. During 2013, the TCEQ received priority calls on surface water in the Brazos River Basin and the San Saba watershed of the Colorado River Basin. The priority calls were suspended in October 2013.

On March 14, 2014, Texas Governor Rick Perry renewed his emergency proclamation for counties affected by the extreme and exceptional drought conditions which “pose a threat of imminent disaster” due to the declining reservoir and aquifer levels, threatening water supplies and delivery systems in these areas. The disaster proclamation included 28 counties within Reach I of the Red River Basin.

## Drought Rulemaking

A new section (11.053) of the Texas Water Code was established by TCEQ's Sunset Bill, House Bill 2694, which allowed the TCEQ Executive Director (ED) to temporarily suspend or adjust water rights during a time of drought or other emergency shortage of water, in accordance with the priority of water rights. The new section also required that the TCEQ enact rules to define "drought" and "emergency shortage of water," as well as establish procedures for notices, hearings, and appeals to the Commission. Therefore, the "Drought Curtailment Rules," Texas Administrative Code, Title 30, Chapter 36, *Suspension or Adjustment of Water Rights during Water Shortage*, was adopted by the TCEQ and became effective on May 3, 2012. TCEQ also began a stakeholder process related to implementation of the new rule. The rule is found on TCEQ's website at:

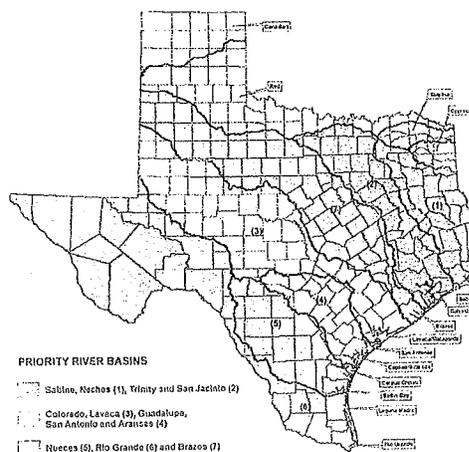
<http://www.tceq.texas.gov/assets/public/legal/rules/rules/pdflib/36%60.pdf>.

Update: In June 2012, Dow Chemical Company made a priority call on waters in the Brazos River Basin. The TCEQ responded by restricting junior water rights in the basin, with an exception for municipal use and power generation. The Texas Farm Bureau filed suit challenging the authority of the TCEQ to make exceptions to the prior appropriation doctrine for certain classes of users. On June 6, 2013, the Texas 53<sup>rd</sup> Civil District Court issued an order concluding that the TCEQ Drought Curtailment Rules are invalid and exceed TCEQ's statutory authority. TCEQ appealed the decision, and the district court's ruling has been suspended pending resolution of the appeal. Both parties have requested oral arguments, but the court has not yet set a date.

## Environmental Flows

Senate Bill 3 (SB 3) from the 2007 legislative session changed the environmental review for water rights permitting from a case-by-case basis to an environmental standards-by-rule process. The environmental flow standards must consist of a schedule of flow quantities, reflecting seasonal and yearly fluctuations that may vary geographically by specific location in a river basin and bay system. SB 3 legislation divides the effort into 11 basins. Priority basins, those containing an associated estuary, began the process, and have either completed or are in the process of developing their first-round of environmental flow recommendations. The Cypress River Basin is the only area within the Red River Basin which has environmental flow studies

PRIORITY RIVER BASIN AND BAY SYSTEMS





wintering whooping crane from the negative impacts of water withdrawals from the Guadalupe and San Antonio River systems that could damage the whooping cranes' habitat in San Antonio Bay. A resulting significant shortfall in blue crab production (their preferred food) could cause an increase of crane mortality rates that might constitute a "taking," contrary to the prohibitions of the ESA.



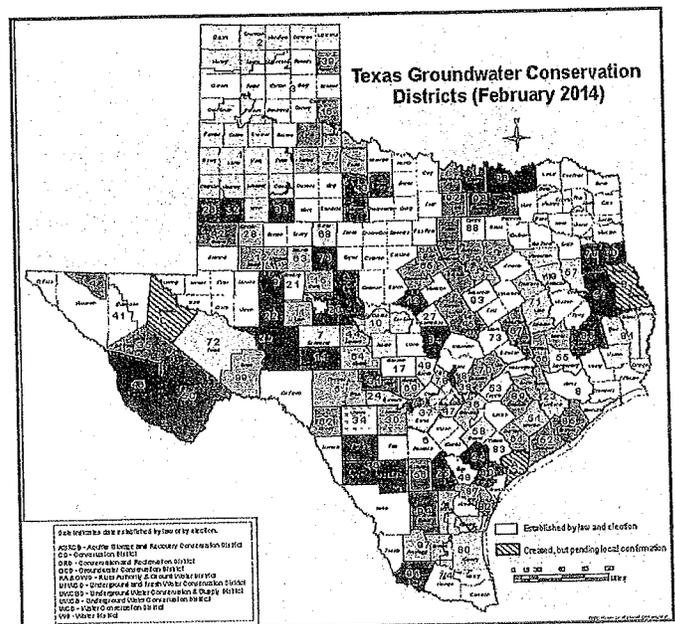
Update: In March 2013, the Corpus Christi Federal District Court judge found in favor of the plaintiffs (TAP), holding that the TCEQ violated the ESA, and the court issued an injunction prohibiting any new permits from being issued for water diversion from the river. TCEQ has appealed the decision to the federal Fifth Circuit Court of Appeals and asked for an emergency stay. The appellate court granted the stay, and the decision was put on hold.

Oral arguments were heard in New Orleans on August 8, 2013, by the Fifth Circuit three-judge panel, but no decision has been issued. Depending upon the ruling, this case could either be headed back to the District Court, or for further appellate review, or potentially, to the U.S. Supreme Court.

### Groundwater Litigation

Groundwater ownership has been at the forefront of water issues at the Texas Legislature and the Texas Supreme Court for the past few years. In 2011, the Texas Legislature passed legislation (SB 332) recognizing that a landowner owns the groundwater below the surface of the landowner's land, subject to regulation by groundwater conservation districts (GCDs). There are currently eight GCDs in the Red River Basin in Texas.

In 2012, the Texas Supreme Court issued its long-awaited decision in *Edwards Aquifer Authority (EAA) v. Day*. At issue in that case was whether a groundwater regulation permit could constitute a "taking" of private property for public use. In its decision, the Court reiterated the 2011 legislation and held that a landowner has absolute title to groundwater in place beneath the landowner's land, subject to the rule of capture and regulation by a GCD.



The Court also held that a restricting a landowner's ability to pump groundwater could amount to a taking, but did not delineate a specific regulatory threshold. The Court remanded the case back to the district court.  
(<http://www.supreme.courts.state.tx.us/historical/2012/feb/080964.pdf>)

Update: The EAA and the Day plaintiffs reached a settlement, thus precluding the district court from determining whether a taking occurred and leaving many unanswered questions for groundwater owners and managers.

In another key groundwater case, the San Antonio Court of Appeals issued a groundwater rights decision in *Bragg v. Edwards Aquifer Authority* in August 2013. The court found that by denying the Plaintiffs' request for permits to utilize groundwater to irrigate two pecan orchards, the EAA's action constituted a regulatory taking that required compensation to be paid to the Braggs. The Court remanded the case to the trial court for valuation. On September 26, 2013, the EAA filed a Motion for Rehearing on the court's decision, which was denied. The EAA may appeal the Court of Appeals' decision that a taking occurred to the Texas Supreme Court.

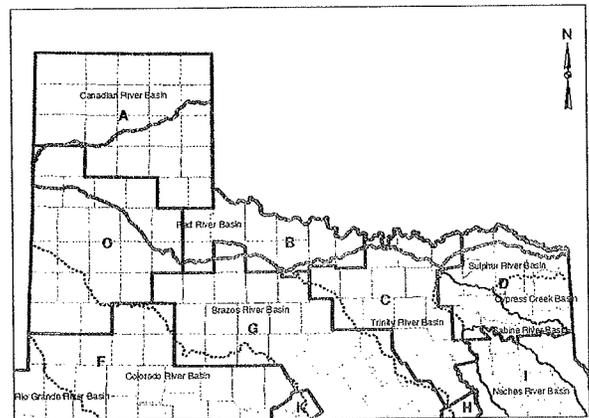
## Texas Water Plan

The 2012 State Water Plan for Texas was developed by the Texas Water Development Board (TWDB) and presented information regarding the recommended conservation and other water management strategies that would be necessary to meet the State's needs in drought conditions, the cost of such strategies, and estimates of the state's financial assistance that would be required to implement these strategies.

The Red River Basin in Texas was evaluated as part of five regional planning groups representing the diverse interests and concerns within the basin. Regional water planning groups are currently working in the Fourth Cycle of Regional Water Planning (2011-2016) to prepare proposals for submission to the Texas Water Development Board. An expected increase in population and the ongoing drought, which has affected the entire Red River Basin, particularly in the western reaches, are influencing much of the planning. Water management strategies for the basin include conservation efforts, construction of new reservoirs, and the re-use of wastewater effluent.

For more information see:

<http://www.twdb.state.tx.us/waterplanning/swp/2012/index.asp>

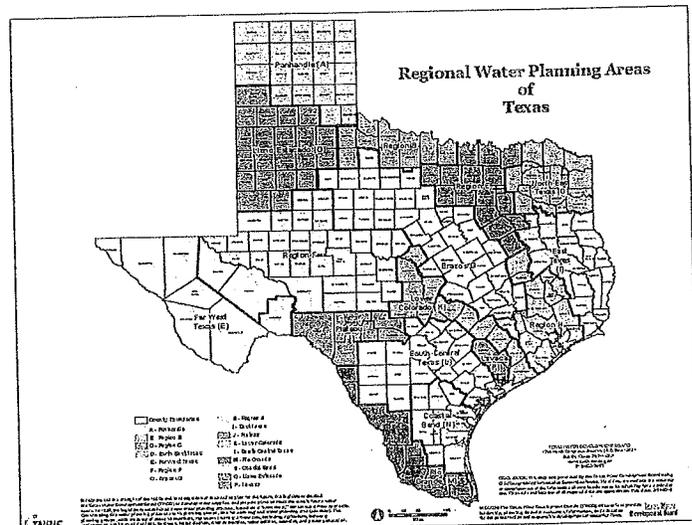


Update: On Nov. 5, 2013, Texas voters approved Proposition 6 for \$2 billion to help finance projects in the State Water Plan. This legislation enables the State to create two funds—the State Water Implementation Fund for Texas (SWIFT) and the State Water Implementation Revenue Fund for Texas (SWIRFT). As required by legislation, funds will be protected by the Texas Treasury Safe Keeping Trust Company (Texas Trust), a special entity created by the legislature to manage, invest and safeguard state funds. The Texas Trust will be responsible for managing and investing the SWIFT's assets and will adopt a written investment policy. The TWDB will manage the administration and disbursement of funds and ensure they are used to finance needed water supply projects. An advisory committee composed of the state comptroller, three state senators, and three state representatives, will make recommendations on rulemaking, the Trust's investment policy, and how the funds will be used. Texas Trust will provide a written report on the investment of the fund to TWDB and to the advisory committee each year.

The TWDB must develop a point system to prioritize projects and develop rules on how the funds will operate before the funds are made available. Once these tasks are complete, the SWIFT can be used to fund rural water projects, projects related to conservation and reuse, and projects in communities and cities of all sizes.

The water plan project prioritization will occur on two levels:

- At the regional level, local leaders will identify critical water supply projects for their areas. Representatives from the 16 regional water planning groups developed uniform standards, approved by TWDB on December 5, 2013, that will be used to prioritize projects at the regional level.
- At the state level, TWDB will establish a scoring system to prioritize those water projects applying for SWIFT funding. Over the course of 2014, the TWDB will develop rules for the criteria and will actively solicit input from the public. Criteria will consider things like how many people will be served by the project, whether the project will serve a diverse urban and rural population, and the ranking by the region. Other considerations include the local financial contribution, emergency needs for water, and the project's impact on conservation.



The funds available through SWIFT will help Texas communities of all sizes—from small rural towns to large metropolitan areas—develop drought-proof water supplies. Projects range from conservation and reuse, to desalting groundwater and seawater, to building new pipelines and developing reservoirs and well fields, to many more.

To be eligible for funding, a project must be included in the most recent state water plan as recommended by local and regional water experts for their communities. Grants are specifically prohibited. By legislative mandate, at least 20 percent of SWIFT funds must be used for conservation and reuse projects, and at least 10 percent must go to projects serving rural communities and Texas farmers.

For more information, see <http://www.twdb.state.tx.us/swift/index.asp>.



**RED RIVER COMPACT COMMISSION****State of Louisiana Commissioners' Report  
Embassy Suites Hotel  
Hot Springs, Arkansas****April 22, 2014**

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**STATUS OF STREAM FLOWS AT AR/LA STATELINE WITH RELATION TO THE SPECIFICATIONS OF THE RED RIVER COMPACT**

As a follow up to our report at the 2013 meeting in New Orleans, the Louisiana contingent of the Compact Commission continues to be concerned with deficient stream flows on some streams at the AR/LA Stateline. The portion of the Compact dealing with Reach IV- ARKANSAS and LOUISIANA, (specifically Sections 7.02 and 7.03) defines the stream flows at Stateline. There is also a general requirement of 40% of the weekly natural runoff in Arkansas for streams crossing the AR/LA Stateline.

We are pleased to report that in 2013, Ouachita River, Beouf River and Bayou Macon flow across the AR-LA Stateline met the compact requirement, with only a few days of insufficiency. However, the number of days when flow of Bayou Bartholomew is less than 80 CFS has been increasing since about year 2000. The 80 CFS requirement has been satisfied about 80% of the time. In 2010, there were 201 days with flow less than 80 CFS.

Louisiana contingent continues to be concerned about deficient flow conditions of the streams in Reach IV, for which a weekly minimum flow is specified in the Compact. These streams are Ouachita River, Boeuf River, Bayou Bartholomew, and Bayou Macon. Of the four streams mentioned, Boeuf River continues to be the greatest concern to Louisiana contingent at this time.

The Louisiana contingent continues to be concerned that future demands for water are likely to produce even more serious flow deficiencies at Stateline. Therefore, we again request that Arkansas implement effective and real-time withdrawal control measures to provide the "equitable apportionment of such waters" at the Stateline, as is stated in the Preamble to the Red River Compact.

**LOUISIANA PETITIONS ARKANSAS NATURAL RESOURCES COMMISSION (ANRC)  
ON JANUARY 9, 2013 FOR ALLOCATION OF STREAM FLOW IN THE BOEUF RIVER**

The Petition and Responses are attached to this report.

## LOUISIANA ATTORNEY GENERAL OPINIONS

According to Louisiana Ground Water Resources Commission's March 15, 2012 Interim Report to the Louisiana Legislature, since 2008, the Office of the Louisiana Attorney General has issued seven key opinions interpreting Louisiana water law.

<u>Year</u>	<u>Opinion</u>	<u>Summary</u>
2008	(08-0176)	There is no right to private ownership of running waters in Louisiana.
2009	(09-0028)	If a lake's water is considered "running water," it is owned by the State.
2009	(09-0066)	Any sales of water must be for fair market value.
2009	(09-0291)	Political subdivisions of the State may only sell running waters with specific legislative authority.
2010	(10-0173)	A riparian owner may access and "use" running water for his estate, but the water remains a public thing owned by the State.
2010	(10-0289)	Statutory language that authorizes a political subdivision to "regulate the use of water" establishes regulatory control over the waters, but does not grant any rights with regard to selling the waters at issue.
2010	(10-0297)	The Sabine River Authority has a special statutory exemption from the limitations set in Opinion 10-0173.

## STREAM GAGING IMPROVEMENT ALONG THE AR – LA STATE LINE

In an effort to improve the accuracy and reporting of discharge along the Arkansas – Louisiana State line, the U.S. Geological Survey, in cooperation with the Louisiana Department of Transportation and Development, relocated an existing stream gage on the Boeuf River and installed a new stream gage on Bayou Macon. These streams, in addition to Bayou Bartholomew and the Ouachita River, are named in the Red River Compact, Article VII, Section 7.03, with their associated minimum discharges.

Historically, discharge on the Boeuf River was measured at the Boeuf River near the AR-LA State line gage (07367700), which was located 2.4 miles south of the state line. The reach of the Boeuf River between this gage and the state line contains several low-water "dams" used to impound water for irrigation (fig. 1). At low stages, these "dams" impede flow and do not allow for the accurate measurement of discharge.

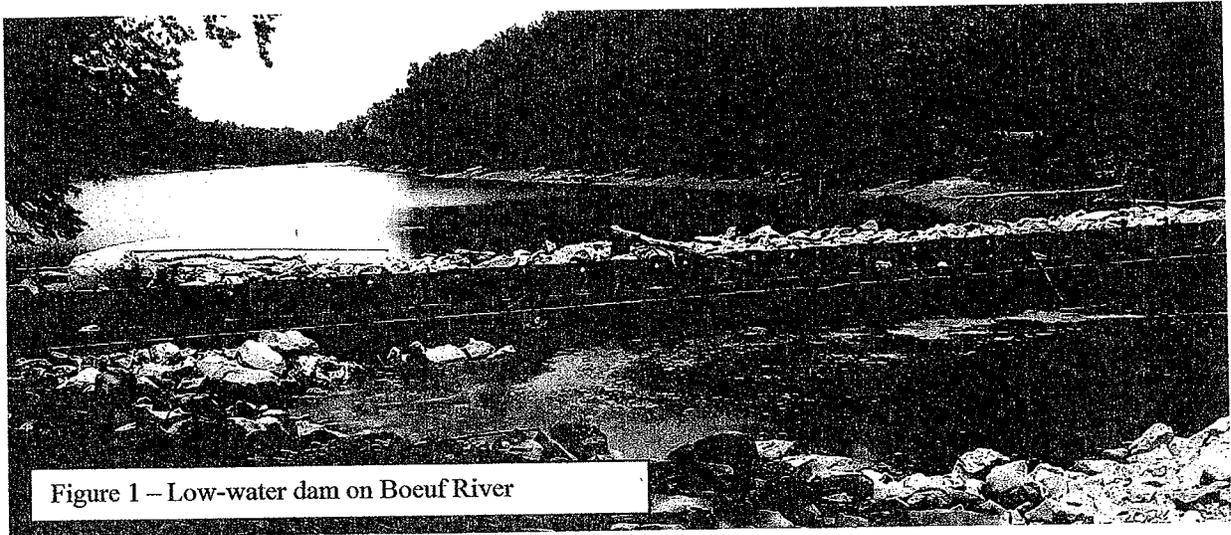


Figure 1 – Low-water dam on Boeuf River

As a result, the Boeuf River near the AR-LA State Line gage (07367700) was relocated on September 15, 2011 to a new location just downstream of the state line. The new gage is Boeuf River at the AR-LA State line (07367690).

The new gage allows for the measurement of discharge at low stages as no low-water “dams” exist between the state line and the gage. Initially, both gages were operated concurrently for the purpose of comparison and continuity of data. That being accomplished, the Boeuf River near AR-LA State line gage (07367700) has been discontinued in favor of the Boeuf River at AR-LA State line gage (07367690).

Also in an effort to improve the accuracy and reporting of discharge along the Arkansas – Louisiana State line, a new gage was established on Bayou Macon near Kilbourne, LA (07369700). The gage on Bayou Macon was established on November 12, 2011 and has associated historical stage and discharge data. Both gages record stage continuously and transmit those data to the Internet. Data associated with these gages may be viewed at:

[http://waterdata.usgs.gov/la/nwis/current?multiple\\_site\\_no=07367700%0A07367690%0A07369700&index\\_pmcode\\_STATION\\_NM=1&index\\_pmcode\\_DATETIME=2&index\\_pmcode\\_00065=3&index\\_pmcode\\_00060=4&format=station\\_list&sort\\_key=site\\_no&group\\_key=NONE&sort\\_key\\_2=site\\_no&html\\_table\\_group\\_key=NONE&rdp\\_compression=file&list\\_of\\_search\\_criteria=multiple\\_site\\_no%2Crealtime\\_parameter\\_selection](http://waterdata.usgs.gov/la/nwis/current?multiple_site_no=07367700%0A07367690%0A07369700&index_pmcode_STATION_NM=1&index_pmcode_DATETIME=2&index_pmcode_00065=3&index_pmcode_00060=4&format=station_list&sort_key=site_no&group_key=NONE&sort_key_2=site_no&html_table_group_key=NONE&rdp_compression=file&list_of_search_criteria=multiple_site_no%2Crealtime_parameter_selection)

## J. BENNETT JOHNSTON WATERWAY, RED RIVER NAVIGATION PROJECT

According to the Corps of Engineers, Vicksburg District, the overall project remains static at approximately 93% complete because of funding deficiencies. Much of the remaining work continues to include refining the revetment and dike system to provide a safe and reliable navigation alignment and to reduce maintenance cost, development of the remaining recreation features as per the master plans and completion of the required mitigation portions of the overall project.

Federal Budget issues for the Corps continue to be a major concern, especially in the area of maintenance dredging. Channel reliability is a cornerstone of business growth and economic development progress and without the resources for the Corps to maintain the channel our growth momentum of the last few years could be impacted.

The Red River Waterway Commission, the local project sponsor, continues to move forward with recreation (without Corps cost sharing) and economic development on the Louisiana portion of the Red River. Funding assistance with port development is a major priority. The Commission continues to be involved with the port commissions of the District allowing them to bring construction projects to fruition faster to help the local economy with job creation and other benefits.

The IMTS has mandated lock service levels on all locks and dams based on annual commercial lockages metric. This mandate could have impacts to the systems reliability. However, with the flexibility built into the plan, the RRWC and RRVA worked in conjunction with the Vicksburg District to provide ample positive data which allowed the District to waive the mandate for 2014. This process will undergo an annual review. This waiver was critically important for a fledging waterway, such as the J. Bennett Johnson Waterway.

**Red River below Denison Dam (levees) and Red River Emergency Bank Stabilization:**  
These projects are not supported by the President's budget and with the earmark scenario in place have not received funding since FY 2011.

**Chloride Control Project:** The previous WRDA Bill clarified that 100% of construction AND operations & maintenance is at full federal expense. After a long delay, the Corps of Engineers can now continue with construction of the next features of this project in Texas (on the Wichita River), while the re-evaluation study continues on the Oklahoma sites. However, budget cuts has eliminated construction funding for the JBJ Waterway, Red River below Denison Dam, Red River Emergency and Chloride Control for fiscal year 2012, 2013 and 2014.

### STATEWIDE FLOOD CONTROL PROGRAM

The final recommended construction program for FY 2014/15 was presented to and approved by the Joint Transportation Committee on March 10, 2014. The approved program has a total of 17 projects with a remaining balance of \$62,640,786. The legislature appropriates about \$10 million dollars a year for the Statewide Flood Control Program.

Approximately \$312 million of state funds have been authorized through the Statewide Flood Control Program since its creation in 1982, funding 180 projects designed to bring about flood damage reduction. This represents a return of \$11.5 in flood control benefits for every state dollar invested. So far 226 construction contracts have been completed. Most projects have more than one construction contract in this program.

## PORT CONSTRUCTION AND DEVELOPMENT PRIORITY PROGRAM

On February 17, 2014, a Public Hearing was held by the Joint Transportation Committee whereby the Port Priority Program presented its FY 2014-15 Construction Program. This Program consists of 15 projects requiring \$93.2 Million in State funding and with an estimated construction cost of \$178.7 million. The Joint Transportation Committee approved the Port Priority Program list of construction project on March 10, 2014. The funding level for FY 2014-15 is anticipated to be \$19.7 million.

Approximately \$593 million of state funds have been committed through the Port Construction and Development Priority Program since it was created in 1989, funding 191 projects. Most projects are constructed with more than one construction contract. When all of the funded projects are completed, they will produce over \$4.2 billion in benefits and will have created or retained 12,314 permanent jobs. This represents a return of \$7.1 in port-related benefits for every state dollar invested.

## DAM SAFETY PROGRAM

Louisiana's Dam Safety Program is approved by the Federal Emergency Management Agency (FEMA) under the Community Rating System (CRS), and has been awarded \$82,667 grant for FY 2013-14. This year's grant will be used to supplement the existing \$500,000 statewide dam safety inspection contract, including preparation of emergency action plans. It will also reimburse travel expenses related to dam safety inspections, EAP preparation, workshops and conferences. There are presently 549 dams in the dam inventory data base. In FY 2012-13, a total of 157 dams were inspected, reports were prepared, uploaded to a server and hard-copies submitted to owners for their information and use in remedial activities. Bayou D'Arbonne Lake's new additional capital outlay spillway project, with two Tainter Gates, was completed a couple of months ago at an approximate cost of \$7.8 M. Construction contract for phase one of the proposed Bayou DeChene \$20M reservoir project has been awarded and construction should begin shortly.

## LEVEE SAFETY PROGRAM

DOTD's Levee Safety Program was established to verify that all non-coastal levee districts are performing and documenting inspection and maintenance activities in north Louisiana. There are eight (8) non-coastal levee districts under DOTD jurisdiction, six (6) of which are located along the Red River and its tributaries with the other two (2) located along the Mississippi and Ouachita Rivers.

Since 2009, an automated data driven levee inspection/data management system is being utilized by the levee districts and DOTD staff. The system assists levee districts not only in their levee inspection and reporting responsibilities, as identified in 33CFR 208.10, but also inventory/asset management as well as maintenance management capabilities.

DOTD staff has accompanied Corp of Engineers in performing periodic inspections on Federal

Levees in the Bossier, Red River, Atchafalaya and Bayou Boeuf (RRABB) and 19th Levee Districts. Additionally, DOTD has used the system for quarterly inspections of the non-coastal levee districts. Since July 2013, the total accumulative miles of all quarterly and semi-annual levee inspections are 2316 miles federal and 53 miles of non-federal levees, which have been inspected and documented.

#### RESERVOIR DEVELOPMENT PROGRAM

The Capital Outlay Program for FY 2013-14 provided funding for the construction of Bayou Dechene Reservoir in Caldwell parish and reauthorized planning and/or design of the following reservoirs: Allen Parish, Ouachita Water Supply, Castor Creek-Little River, Washington Parish Reservoir and Bundicks Lake Water Level Control Structure.

The program had previously provided funds for the construction of the D'Arbonne Lake new Tainter-Gate Spillway project which was completed about three month ago.

The Capital Outlay Program for FY 2013-14 also provided \$1 million non-cash line of credit for the second phase of a Reservoir Development Master plan, including preparation and promulgation of applicable rules and regulations. The first phase, Reservoir Development Priority Program studies and procedures have already been completed and posted on the DOTD-Public Works and Water Resources Division web site.

#### REHABILITATION AND REPAIR OF STATE-MAINTAINED RESERVOIRS & DAMS

The Capital Outlay Program had previously provided \$2 million of funds for Rehabilitation and Repair of the state-maintained dams and reservoirs. A portion of these funds were used to retain a consultant to perform acoustic surveying, underwater inspections and evaluation, and gate replacement, spillway and other repairs to the DOTD-maintained dams.

Last year the DOTD District Office in Shreveport contracted out and remediated the embankment sections of two state-maintained dams, using the above mentioned funds.

#### BREACH ANALYSES AND EAPs FOR HIGH HAZARD-POTENTIAL DAMS

Breach analyses, Emergency Action Plans (EAPs) and Table-top exercises had previously been completed for all 20 DOTD-maintained dams. Presently, all 45 High Hazard (HH) potential dams, public or privately owned, presently have EAPs (100%).

Efforts to develop EAPs for all Significant Hazard (SH) potential dams (excluding 14 USACE Locks & Dams) are presently on-going. The EAPs for 21 of these dams have been completed.

## FEDERAL PROJECTS

DOTD is currently the Non-Federal Sponsor with the US Army Corps of Engineers (USACE) in the planning, design, and construction of two flood control projects. These projects will provide protection from various storm events, including hurricane and tidal flooding, and flooding from high waters. The estimated total costs of these projects are currently projected to be over \$3 billion over the next 20 years. The two projects are:

On the Mississippi River Levee raising project, DOTD is assisting US Army Corps of Engineers Vicksburg Division through acquisition of Right of Ways (ROW) along the Mississippi River. LA Hwy 131 and LA Hwy 603 are two road relocations that will accommodate the alignment of the levee. The LA 131 relocation was completed in November 2009, and LA Hwy 603 relocation was completed in October 2013. Currently, DOTD is coordinating with the 5<sup>th</sup> Levee District for ROW acquisition. This is an ongoing project raising the levees from the north eastern part of Louisiana to as far south as funds allow. Since 1994, Louisiana has received over \$126 million in federal funds for the Mississippi River Levee Raising Project.

The Comite River Diversion Canal was designed for the reduction of flood water on the Comite River and within the Amite River Basin. The construction of the Lilly Bayou Outfall Structure has been completed. Working with Amite River Basin Commission, DOTD has been acquiring both project right-of-way and mitigation land from willing sellers. As of April 2014, updated 95% plans for Highways 61, 964, and 67 are under review at DOTD and USACE.

## FLOODPLAIN MANAGEMENT PROGRAM

The Floodplain Management Section of DOTD operates under a 75% / 25% Federal-State Cooperative Funding Agreement with FEMA to coordinate the National Flood Insurance Program (NFIP) regulations for the 312 participating communities which includes all 64 parishes. The Section also provides assistance to communities interested in participating in the Community Rating System (CRS), a program which reduces flood insurance premiums through more stringent development regulations than the minimum requirements of the National Flood Insurance Program (NFIP). Over 80% of the flood insurance policies in Louisiana are within the 41 communities participating in the CRS program resulting in an annual savings of over \$36 million dollars in flood insurance premiums statewide.

The Floodplain Management Section traveled over 20,000 miles visiting approximately 100 Louisiana NFIP communities, offering a wide variety of post-disaster assistance, performing Community Assistance Visits (CAVs), providing CRS assistance, General Technical Assistance and NFIP training. With the completion of the HSDRSS, the updated Preliminary Flood Insurance Rate Maps were released for the Big five Parishes in the Greater New Orleans Area- Jefferson, Orleans, Plaquemines, St. Bernard and St. Charles Parishes, with Public Open Houses providing extra education and outreach information. The 2012 NFIP Reform Act is bringing significant changes to the Program and will require more emphasis on education and training. Katrina/Rita post-disaster NFIP assistance is still ongoing, as is Gustav, Ike and Isaac.



BOBBY JINDAL  
GOVERNOR

STATE OF LOUISIANA  
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
P.O. Box 94245  
Baton Rouge, Louisiana 70804-9245

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(225) 379-3015



SHERRI H. LEBAS, P.E.  
SECRETARY

January 9, 2013

Arkansas Natural Resources Commission  
101 East Capitol, Suite 350  
Little Rock, Arkansas 72201

Dear Commissioners:

We, the undersigned Louisiana Commissioners for the Red River Compact Commission (RRCC), do petition the Arkansas Natural Resources Commission (ANRC) for an allocation of stream flow in the Boeuf River (Crooked Bayou) to relieve the deficient flow conditions that exist at times at Stateline in the Boeuf River. This petition is based on Sections 307.1 and 308.2, Subtitle VII, of ANRC "Rules for the Utilization of Surface Water." It is our desire that this petition be considered in the next meeting of the ANRC.

The Red River Compact, to which Arkansas is signatory, calls for Louisiana to receive 40% of the weekly natural runoff of the Boeuf River, with a minimum flow target of 40 CFS. We can well understand the difficulty in arriving at a weekly natural runoff; therefore, this petition focuses on low-flow events. We have concluded that 40 CFS represented a flow that was equaled or exceeded about 95% of the time at the time of the inception of the Compact (1978).

The attached report, based on records for the USGS gauging station just south of Stateline, shows by calendar year the minimum flow, the number of days of zero (0.00 CFS) flow, the length of the longest period of zero flows, and the number of days when flow was less than 40 CFS. Daily stream flow data was available from 1958 to 1980 and from 1986 to 2011.

From the report, it seems that substantial changes took place in the Boeuf River (Crooked Bayou) basin north of Stateline beginning in about the 1970's. Zero flow events began to occur with long periods of that absence of flow. This condition was expanded from 1986 on with greatly increasing numbers of days with flow less than 40 CFS. You may note that in 2011, there were 150 days of zero flow and 190 days with flow less than 40 CFS.

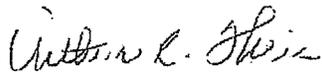
From aerial photos, we can see that a two-weir installation exists on the River about 4 miles upstream from Stateline. Phone contacts indicate that the weirs are fixed and that plans of the Corps of Engineers to restore the weir crests to the original elevations are underway. Aerial photographs of the reach from Arkansas State Highway 8 south to Stateline also indicate the possible locations of a number of pumping plants on the River. Very noticeable is a plant near Stateline (west bank) that we feel pumps to a large open water area reportedly used to store water for irrigation.

Arkansas Natural Resources Commission  
January 9, 2013  
Page -2-

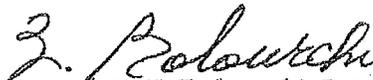
Contact with the Operations Division, COE, Vicksburg, revealed that the construction of weirs in the streams crossing the ARK/LA Stateline had the purpose of keeping the streams open for drainage; pools created by the weirs prevented trees and brush from growing in stream bottoms. We also were informed that the weirs were likely constructed in the late 1950's or early 1960's, prior to the Red River Compact.

Our conclusion is that between the noted weirs (and perhaps others upstream) and increases in withdrawal in Arkansas, the water in Boeuf River can no longer reach Stateline during lower flow conditions. This condition has come to our attention as well as the attentions of agricultural, environmental, and fish/wildlife interests in Louisiana.

We respectfully request that the Commission consider this petition and act to satisfy the specifications in the Red River Compact with regard to flows in Boeuf River. We are available to meet with you at a mutually acceptable location and time if necessary.



Arthur R. Theis, P.E.  
LA Commissioner, RRCC  
688 S. Lakeview Dr.  
Baton Rouge, LA, 70810  
Phone (H) 225-819-0055  
(C) 225-937-9845  
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Zahir ("Bo") Bolourchi, P.E.  
For: LA Commissioner, RRCC  
La. Dept. of Trans. & Dev.  
P.O. Box 94245  
Baton Rouge, LA 70804-9245  
Phone (O) 225-379-3009  
Email: [Bo.Bolourchi@la.gov](mailto:Bo.Bolourchi@la.gov)

cc: Honorable James D. Caldwell, Attorney General  
Honorable Mike Strain, DVM, Commissioner of Agriculture & Forestry  
Honorable Senator Francis C. Thompson  
Honorable Senator Gerald Long  
Mr. Richard Savoie, P.E., DOTD Chief Engineer  
Mr. Chris Knotts, P.E., DOTD Administrator, Public Works & Water Resources  
Mr. Brandon Brown, DOTD General Counsel  
Mr. Jason Placke, DOTD Attorney  
Mr. Randy Young, Exec. Dir. ANRC



# Arkansas Natural Resources Commission



J. Randy Young, PE  
Executive Director

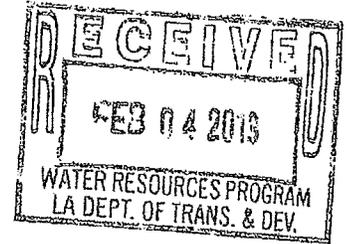
101 East Capitol, Suite 350  
Little Rock, Arkansas 72201  
<http://www.anrc.arkansas.gov/>

Phone: (501) 682-1611  
Fax: (501) 682-3991  
E-mail: [anrc@arkansas.gov](mailto:anrc@arkansas.gov)

Mike Beebe  
Governor

January 30, 2013

Mr. Arthur R. Theis, P.E.  
Louisiana Commissioner, RRCC  
688 S. Lakeview Drive  
Baton Rouge, LA 70810



Mr. Zahir ("Bo") Bolourchi, P.E.  
Louisiana Commissioner, RRCC  
Louisiana Dept. of Transportation  
and Development  
Post Office Box 94245  
Baton Rouge, LA 70804-9245

Dear Commissioners:

I received your petition for allocation of stream flow in the Boeuf River and forwarded it to the members of the Arkansas Natural Resource Commission (ANRC). ANRC met Wednesday, January 23, 2013, and discussed responses to your petition.

We are of the opinion that ANRC cannot begin allocating Boeuf River stream flow until the Red River Compact Commission adopts the rules for Compact compliance, specifically the amount of water that is equivalent to "weekly runoff." This amount is an integral part of our allocation calculation because our state law recognizes that water reserved for federal compacts must be subtracted from the total amount of water available for allocation before we can begin our allocation process.

Also, ANRC believes that construction of the Boeuf-Tensas Irrigation Project could bring water into Louisiana, and that the support of Louisiana might be the catalyst needed to direct federal funding to the Corps of Engineers to move forward with the project.

Commissioners Theis and Bolourchi  
January 30, 2013  
Page 2

ANRC's Chair, Ann Cash, appointed a committee to further discuss how to amicably resolve issues brought forth in your petition. I believe it would be beneficial for the committee to visit with the Louisiana Red River Compact Commissioners after the Compact's annual meeting in April.

Sincerely,



J. Randy Young, P.E.  
Executive Director

JRY:CP:ps

Cc: Arkansas Commissioner Wayne Dowd, RRCC  
ANRC Commissioners  
Edward Swaim, ANRC  
Crystal Phelps, ANRC



BOBBY JINDAL  
GOVERNOR

STATE OF LOUISIANA  
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
P.O. Box 94245  
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SHERRI H. LEBAS, P.E.  
SECRETARY

February 15, 2013

Mr. J. Randy Young, P.E.  
Executive Director  
Arkansas Natural Resources Commission  
101 East Capitol, Suite 350  
Little Rock, Arkansas 72201

Dear Mr. Young:

Reference is made to your letter of January 30, 2013, informing Louisiana Red River Compact Commissioners of the action taken by the Arkansas Natural Resources Commission (ANRC) at its January 23, 2013 meeting, with regards to our January 9, 2013 request pertaining to stream flow in Boeuf River. Your letter indicates that ANRC cannot take any action related to stream allocation on Boeuf River until the RRCC adopts rules for compact compliance, specifically the amount of water equivalent to "weekly runoff". However, our request was specifically related to the RRCC provisions of Article VII, Apportionment of water – Reach IV, Arkansas-Louisiana, Section 7.02 – Subbasin 2 – Interstate Streams – Arkansas and Louisiana.

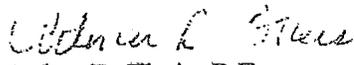
In your dual role as Executive Director of ANRC and also an Arkansas Red River Compact Commissioner, we feel sure you are fully aware of the provisions for Reach IV. Please note that the Compact has no specific requirements that the Compact adopt "rules of compliance" to enable each state to meet the terms of the Compact. It is the responsibility of each state to provide the scientific (engineering, etc.) data to develop the information required to enable that state to comply with the Compact provisions.

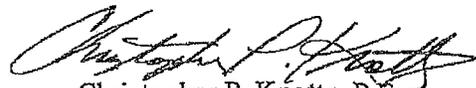
Our letter to ANRC was not a request for allocation of water for Louisiana. The flow requirements to Louisiana are already defined in the Compact. Our request was an effort to get Arkansas to recognize their responsibility under the terms of the Compact and to take whatever action is necessary to meet that need.

Mr. J. Randy Young, P.E.  
February 15, 2013  
Page -2-

We will be glad to meet with the ANRC Committee appointed by Ms. Ann Cash and with you to resolve our continuing deficient flows in Reach IV. A meeting prior to our April RRCC meeting might help us to expedite a resolution to this problem.

Sincerely,

  
Arthur R. Theis, P.E.  
LA Commissioner, RRCC  
688 S. Lakeview Dr.  
Baton Rouge, LA, 70810  
Phone (H) 225-819-0055  
(C) 225-937-9845  
Email: [arttheis@cox.net](mailto:arttheis@cox.net)

  
Christopher P. Knotts, P.E.  
LA Commissioner, RRCC  
LA Dept of Transportation & Development  
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Email: [chris.knotts@la.gov](mailto:chris.knotts@la.gov)

cc: Honorable James D. Caldwell, Attorney General  
Honorable Mike Strain, DVM, Commissioner of Agriculture & Forestry  
Honorable Senator Francis C. Thompson  
Honorable Senator Gerald Long  
Mr. Richard Savoie, P.E., DOTD Chief Engineer  
Mr. Zahir "Bo" Bolourchi, P.E., DOTD Director, Water Resources Program  
Mr. Brandon Brown, DOTD General Counsel  
Mr. Gordon W. "Jeff" Fassett, P.E., RRCC Chairman



**RED RIVER COMPACT COMMISSION  
STATE OF ARKANSAS  
COMMISSIONER'S REPORT  
2014**

**ARKANSAS WATER PLAN UPDATE**

Water supply availability has been assessed and Arkansas's water demands have been determined and forecast to 2050. The reports are available at [www.arwaterplan.arkansas.gov](http://www.arwaterplan.arkansas.gov).

In 2014, we have recruited workgroups in each of our five planning regions who have met several times to identify water issues and to work toward recommended management approaches. A major goal of the update is to engage water users, and we have been pleased with the level of participation.

In November 2014, the Natural Resources Commission will receive the final reports, including all the data developed in the update, the issues identified, and recommended management strategies. In 2015, the Commission will proceed with rulemaking to adopt the revised excess surface water calculations and the recommendations from the public participation process that the commissioners endorse and decide to pursue as state water policy.

Another goal is to keep the members of the workgroups engaged in implementation of the Water Plan and in a continuing effort to update and improve data, forecasts, and policy.

**NONPOINT SOURCE (NPS) POLLUTION MANAGEMENT PROGRAM**

**Priority Watershed Program**

In FFY2014 the Environmental Protection Agency has fully instituted changes within the NPS Program nationally. These changes were a result of a United States General Accountability Office audit and EPA's own internal review. The Arkansas Natural Resources Commission's (ANRC) NPS Management Program had previously updated the NPS Management Plan (Plan). Additional modifications of the Plan were necessary based upon EPA comments. The last modification was submitted to EPA in December 2013 and ANRC anticipates full acceptance of the Plan. ANRC identified ten priority watersheds utilizing a Risk Assessment matrix. Those watersheds of interest include: Bayou Bartholomew, Lower Ouachita – Smackover and Upper Saline.

Upon receiving the FFY2014 funding allocation information ANRC will be submitting a workplan to fund administration of the NPS program for a period of 3 years. The workplan is scheduled to be submitted in April and upon EPA approval will be initiated October 2014. Utilizing the FFY2014 funding allocation to funding administrative cost will insure FFY2015 – 2017 funding will be direct to "on the ground" implementation.

## **GROUNDWATER PROGRAM SUMMARY**

In 2013, the Groundwater Section assisted with groundwater demand, availability, and gap analysis for the update of the Arkansas Water Plan. A comprehensive groundwater effort was initiated with the USGS to develop a report on the aquifers of Arkansas which will provide information on groundwater quality, quantity, use, sustainability, and law. Additional work included collection of statewide groundwater data and producing the annual groundwater report. The staff also performed water well program licensing, well inspection, and construction report database management tasks. Six meetings of the Arkansas Water Well Construction Commission were held. The section also provided hydro geologic data and technical assistance to other agencies, the public, and other divisions of ANRC.

The Groundwater Section of the ANRC is responsible for statewide ground-water resources planning, management, and conservation activities, water-level measurements, analysis and reporting of data, and administration of some portions of the Arkansas Water Well Construction Commission (AWWCC) program.

Each year ANRC staff works closely with the US Geological Survey (USGS) and the Natural Resource Conservation Service to collect water-level data from a network of approximately 1500 wells and springs statewide. This data is analyzed and reported in the annual Groundwater Protection and Management Report; a report generated as part of the Arkansas Water Plan activities since the early 1990's. This section also provides data, presentations, and hydrogeologic evaluation to other agencies and the public as requested.

The Groundwater Section is also responsible for the licensing and registration of about 175 water well contractors, and over 280 drillers, with 270 pump installers. Two water well construction inspectors perform water well inspections in response to complaints or routine area visits. All wells constructed in the state are required to meet standards as defined in the rules and regulations of the Arkansas Water Well Construction Act. The section also works with the USGS to update and maintain water well construction reports as part of the Arkansas Water Inventory System. This inventory provides data on well construction, locations and depths, driller's logs, water use categories, yield, and pump information.

## **RED RIVER NAVIGATION STUDY**

Four alternatives are being evaluated by the US Army Corps of Engineers, Vicksburg District. Plan A contains two lock and dams above Shreveport to provide a 9 ft. channel to the vicinity of Garland at U.S. Highway 82. Plan B is a three lock and dam system. Plan D anticipates a two lock and dam system to provide navigation to Fulton, Arkansas. Plan E is a three lock and dam plan to Index, Arkansas. Because the transportation benefits for extending navigation from Fulton to Index are minimal, the Corps is not evaluating Plan E as intensely as the other alternatives. Current "freight rates" must be reevaluated to update benefit-cost ratio. The Red River Commission is

working to survey potential shippers to show a positive benefit-cost ratio for the alternatives.

### **COMPACT COMPLIANCE**

Arkansas and Louisiana are working to assess runoff, flows, and water use in interstate streams in Southeast Arkansas.

Agency staffs continue to communicate regarding these flows. Weekly, Louisiana compiles and distributes gauged flows in Bayou Macon at Eudora, Ark. and near Kilbourne, La., Bayou Bartholomew near Portland, Ark. and Jones, La., the Boeuf River at the state line, the Ouachita River at West Monroe, La. and Felsenthal Lock and Dam, and the Red River at Spring Bank, Ark.

ARNC paid for a new USGS gage on the Boeuf River further upstream of the existing gage to provide information in the heart of the diversions with the hopes that the staff can track changes while they occur.

The Arkansas staff continues to research and test the possibility of using HEC-HMS for flow calculations at the state line. However, due to the difficulty of calculating the flow in the region and the limited resources available, this method will not create adequate results to determine if proper flows are crossing the state line.

With the urging of the Commissioners from Louisiana, the staff at ANRC has researched the large reservoir at the state line on the Boeuf River. The staff will visit this reservoir and the weirs and gages on the Boeuf River once the flow decreases.

### **SOUTHEAST ARKANSAS BOEUF-TENSAS FEASIBILITY STUDY**

The Vicksburg District in conjunction with the Boeuf-Tensas Regional Water Distribution District is studying the potential to introduce water from the Arkansas River through an 8-foot by 8-foot structure into Bayou Bartholomew and Deep Bayou. Water would gravity flow through the system and not be pumped. Arkansas has worked with the Louisiana Department of Agriculture and Forestry and they have agreed to become a "non-federal sponsor" with Arkansas. Funds are being contributed from both states to be used for continuing studies.

### **NATIONAL FLOOD INSURANCE PROGRAM (NFIP)**

The Arkansas Natural Resources Commission (ANRC) is the State Coordinating Agency for the NFIP in the State of Arkansas. The Commission maintains a database of 577 communities in Arkansas, which includes 75 counties and 502 cities and towns. Sixty-five counties and 353 cities and towns participate in the NFIP. Each participating community has a local floodplain administrator. Local floodplain administrators are required by State law to attend eight hours of training per year. Training may take the form of ten or more State-sponsored one-day workshops or other approved training provided by the State or other qualified provider. Sixty-four communities have at least one Certified Floodplain Manager (CFM).

## **SAFE DAMS PROGRAM**

In the counties lying in the Red River Compact area, the Arkansas Natural Resources Commission (ANRC) permits 104 dams.

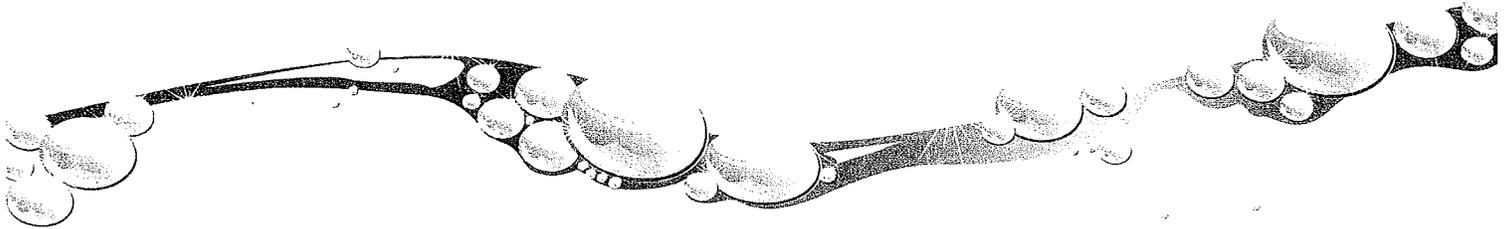
ANRC manages the Safe Dams Program for the State of Arkansas. At present ANRC has 411 active permitted dams that it inspects on a routine basis. Of the 411 active permit dams, 114 are high hazard, 92 are significant hazard, and 205 are low hazard.

ANRC staff inspected 48 dams in 2013. Of the ANRC inspected dams, 27 were high hazard, 15 were significant hazard, and 6 were low hazard. An additional 165 dams were inspected through an agreement with NRCS. Of the NRCS inspected dams, 44 were high hazard, 37 were significant hazard, and 84 were low hazard.

There are a total of 1,340 dams in ANRC's database. Of the total, the State regulates 411, 61 of these dams are regulated by Federal agencies, and the remainder do not meet size or hazard criteria for regulation.

# ESSENTIAL FOR LIFE: PLANNING FOR OUR WATER FUTURE

WHAT'S INSIDE:  
The Arkansas Water Plan  
Livestock, Poultry and Aquaculture Water  
The Groundwater Challenge





RICE — OUR MOST WATER-INTENSIVE CROP.  
PHOTO: ARKANSAS DEPARTMENT OF PARKS AND TOURISM

## What is the Arkansas Water Plan, and How is Agriculture Involved?

**W**ater planning in Arkansas is not new. As far back as the 1930s, the State Planning Board looked at the enormous potential of our water resources and discussed putting them to use to grow our economy and enhance our state's natural beauty. This continued through the following decades.

In 1969, the Arkansas General Assembly created the Arkansas Water Plan to help Arkansans make informed decisions regarding the "orderly development and management of the state's water and related land resources."

Since then, the Arkansas Natural Resources Commission (formerly the Soil and Water Conservation Commission) has worked to assess our natural assets, our human and environmental needs, and our opportunities and challenges. Water goals have been set, and solutions ranging from better water education, advanced data collection, improved policies and programs, to specific water supply and wastewater treatment projects, have been identified and implemented.

The last full update of the Plan followed the drought of 1980, when the people of Arkansas were again reminded of the vital role of water in the state's economy. That update resulted in the current Plan in 1990. All of the water issues identified then are still relevant today. Arkansas has made substantial progress toward implementing programs and projects proposed in the 1990 Plan update, but many challenges remain, and new ones have emerged.

In 2011, the Arkansas legislature directed that the Plan undergo a comprehensive update for the first time in 20 years. This time, there is a considerable emphasis on participation by the public.

**"WATER AND THE RIGHT TO USE IT ARE IMPORTANT TO EVERY FARM FAMILY IN ARKANSAS"**

*~ Water, Its Use and the Implications for Arkansas Agriculture, Arkansas Farm Bureau Federation 1981*

During the technical stages of compiling facts and figures, agriculture has been very involved.

Poultry, aquaculture, cattle, and row crop producers have advised the Natural Resources Commission and its engineering firms on the best sources of production and water use data, and on the most credible methods to forecast water demands out to 2050. With this involvement, the update will help us to plan to put our abundant water resources to the best use for the future of Arkansas.

During 2014, as we identify concerns and opportunities for our water future, we will depend on continued participation from agriculture in the process.

# The Groundwater Challenge

**C**rop irrigation accounts for about 80 percent of the state's total water demand. Eighty-four percent of this water comes from the ground.

By 1927, lower water tables prompted Senator T.H. Caraway of Jonesboro to request the U.S. Geological Survey to study groundwater. Later planning efforts continued to discuss the problem:

"In the Grand Prairie region, the extraordinary draft of the rice irrigation water demand is, in some areas, steadily lowering groundwater levels," Arkansas Water Resources Report by the State Planning Board – 1939.

The 1990 Water Plan found continuing declines. Adopting Plan recommendations, the legislature escalated state groundwater studies.

Our approach to declines has been education, conservation, and projects to use surface water. In east Arkansas,

the Plum Bayou Irrigation Project uses Arkansas River water to supplement groundwater and has been in operation for 20 years. Larger diversion projects, the Grand Prairie Area Demonstration Project and Bayou Meto Water Management Project are under construction. Conservation efforts, such as on-farm storage of water in reservoirs and more efficient irrigation techniques are being employed all over the state.

However, we continue to withdraw well over 7 billion gallons of water a day from our largest groundwater source, the alluvial aquifer. This is over twice the amount of water that the aquifer can provide without losing storage.

As the update process continues, we will have to evaluate the success of current responses to the problem and make some tough decisions about the future to sustain the economic engine of irrigated agriculture.

## The Water Planning Process

As the Arkansas Water Plan is updated, several steps lead to the final product to answer four essential questions:

How much water do we need now and in the future?

How much water is available now and in the future?

Where do we predict short-falls in water, policies, financing, etc.?

What tools can we use to meet future needs?

Reports using the best available information and input of water users from all over the state – and from all aspects of our economy to forecast water demand and supply out to 2050 – are available on our website: [www.arwaterplan.arkansas.gov](http://www.arwaterplan.arkansas.gov).



## Sound, Basic Information and Citizen Participation Lead to Crop Irrigation Demand Forecast

The 1990 Plan update resulted in the Water Use Registration Database administered by the Arkansas Natural Resources Commission and the state's Conservation Districts.

Every year use from more than 6,100 surface water withdrawals and 49,000 wells is reported. This includes public water supplies and industry, but most withdrawals are for agriculture.

We know how much water we use, but how much will we use in the future? That depends on how many acres will be irrigated.

Irrigated acreage is estimated

to increase for most crops in most counties. The volunteers on the Agricultural Water Demand Subgroup put common sense and experience to work in making sure the numbers are based on the best available information.

As of 2010, Arkansas farmers irrigated 4,999,780 acres. Soybeans lead with 2,335,111 acres, rice at 1,780,410 acres, cotton at 508,610, followed by corn at 93,316. Other crops accounted for another 93,316 irrigated acres. Water demand to irrigate these crops is 8.8 billion gallons per day.

The forecasts are intended to capture long-term trends, rather than shorter-

term reactions to factors such as prices. There will be years when acres planted vary from the forecast.

The planning consultants and workgroup members determined county-by-county that farmers will expand irrigation to all tillable acreage available. At the forecasted rates, by 2050, overall irrigation demand will increase by 13 percent.

Soybean acreage is predicted to increase the most, until we irrigate more than 4 million acres. By 2050, we forecast a demand of more than 10 billion gallons of water a day.



ARKANSAS BEEF CATTLE REQUIRE ABOUT 12 GALLONS OF WATER PER DAY.  
PHOTO: RANDY YOUNG

## Livestock, Poultry and Aquaculture Water Use

**M**ost livestock and poultry farmers use less than 1 acre-foot per year or buy their water from public systems, so it is not reported separately to the Arkansas Natural Resources Commission. Without reported use, it was necessary to determine animal counts and multiply them by the average amount of water used per animal. Livestock and poultry producers on the Water Demand Subgroup were very helpful in making sure that we arrived at good numbers for water use.

Using U.S. Department of Agriculture projections through 2022, the engineering firms working on the Plan update consulted the Subgroup to forecast livestock and poultry water use in each of our 75 counties to 2050.

Current livestock and poultry water use is approximately 26.8 million gallons per day. Forecasts show growth in chicken, turkey and beef cattle production, while numbers of hogs, sheep, goats, dairy cattle and horses hold relatively steady. By 2050, we expect this

sector to use about 29.29 million gallons per day.

Water use for fish farming by county is calculated by species type and number of acres of ponds in combination with water application rates per species. Overall, with the exception of catfish, aquaculture water demands did not show significant past trends and no major drivers for growth were identified. For planning purposes, demands are held constant for all species types over the forecast period. Twenty-five counties were identified with aquaculture activities. The Aquaculture Water Demand Subgroup of citizens involved in the industry greatly assisted the assessment of this water use.

This industry uses about 103 million gallons per day each year, and the planning team expects this to remain about the same during the period the update covers. Since all water for aquaculture comes from the ground to control parasites and disease, success depends on a supply of good quality groundwater.

### HOW TO STAY INVOLVED IN THE ARKANSAS WATER PLAN UPDATE

The final recommendations for the Water Plan update will be presented to the Arkansas Natural Resources Commission in November of 2014. Please don't wait until then to take the opportunity to be a part of the process.

The easiest way to stay aware of the update progress is to sign up for our monthly email newsletters on our website: [www.arwaterplan.arkansas.gov](http://www.arwaterplan.arkansas.gov). If you prefer, we can mail you paper copies.

For a more active role, review the information and reports posted on our website. Look for areas of interest to you that are not specifically or adequately addressed in meetings and reports. Meeting minutes and agendas will be very helpful, (minutes of meetings and agendas are located on the website) even without attending each one. If there are items that should get more attention, send comments to [arkansaswater@cdmsmith.com](mailto:arkansaswater@cdmsmith.com).

Especially get involved and be heard at our regional planning meetings in 2014. This is where we will compare demand and supply to identify gaps, and then work on solutions that may range from specific projects, better monitoring and science, more money for infrastructure, to suggested changes in laws and rules.

Most of all, keep your friends, local government officials, and legislators informed about the Plan and what it means to the future of Arkansas.

Follow us on Facebook and Twitter (@arkwaterplan).



**RESOLUTION  
OF THE  
RED RIVER COMPACT COMMISSION  
REGARDING  
THE FUNDING OF STREAMFLOW GAGES  
April 22, 2014**

**WHEREAS**, the Red River Compact, signed May 12, 1978 and approved by Congress apportions the waters of the Red River basin between the States of Arkansas, Oklahoma, Texas and Louisiana;

**WHEREAS**, the four states have worked cooperatively together to develop and maintain the streamflow gaging network necessary to administer the provisions of the Compact;

**WHEREAS**, the cooperation and the establishment of this gaging network has resulted in the administration of this Compact with minimal controversy and no interstate litigation;

**WHEREAS**, the apportionment and calculations required to administer the Compact necessitate the maintenance of streamflow gages along the Red River and its tributaries at critical locations to measure the flow of water;

**WHEREAS**, it is critical for the administration of the Red River Compact that these streamflow gages be maintained;

**WHEREAS**, the U.S. Geological Survey (USGS) has historically entered into cost share agreements with cooperators to maintain a nationwide streamflow gaging network through the Cooperative Water Program (CWP);

**WHEREAS**, the CWP has served for over 110 years as a federal/non-federal partnership which historically was funded through a 50/50 cost share agreement. Today, the majority of the funding for the CWP comes from non-federal sources;

**WHEREAS**, the ability to maintain this network of national gages to meet long term federal goals has declined due to a loss of cooperators because of the increased costs of funding which prompted Congressional establishment of the National Streamflow Information Program (NSIP);

**WHEREAS**, the USGS established goals to satisfy minimum national streamflow information needs with the intent to support these gages entirely with federal funds;

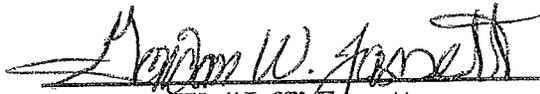
**WHEREAS**, a priority goal of NSIP is to “meet legal and treaty obligations on interstate compacts and international waters;”

WHEREAS, the streamflow gages necessary to administer the Red River Compact qualify under this priority goal for full federal funding under NSIP.

NOW, THEREFORE, BE IT RESOLVED that, the Red River Compact Commission requests that Congress fully fund the NSIP gages associated with the Red River basin and Red River Compact and the USGS place a priority on funding these gages under NSIP.

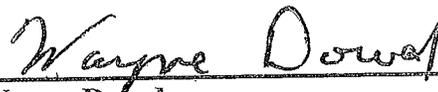
BE IT FURTHER RESOLVED that, federal funding for the CWP be restored to ensure the historical partnership match of 50/50.

BE IT FURTHER RESOLVED that, a copy of this resolution be sent to the members of the congressional delegations for the States of Arkansas, Oklahoma, Texas and Louisiana, the Secretary of the Interior, and the Director of the USGS.

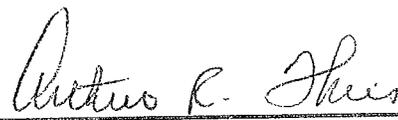
  
Gordon W. "Jeff" Fassett  
Federal Commissioner and Chairman  
Red River Compact Commission

4/22/2014  
Date Executed  
April 22, 2014

Concurred to and supported by:

  
Wayne Dowd  
Commissioner for Arkansas

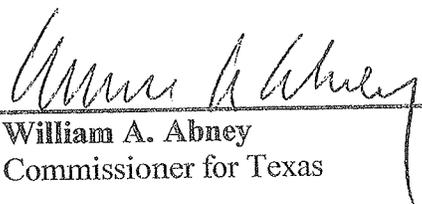
  
J. Randy Young, P.E.  
Commissioner for Arkansas

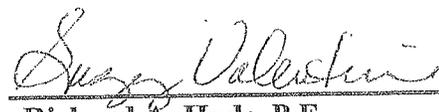
  
Arthur R. Theis, P.E.  
Commissioner for Louisiana

  
for: Christopher P. Knotts, P.E.  
Commissioner for Louisiana

  
Charles Lynn Dobbs  
Commissioner for Oklahoma

  
J. D. Strong  
Commissioner for Oklahoma

  
William A. Abney  
Commissioner for Texas

  
for: Richard A. Hyde, P.E.  
Commissioner for Texas



## NRCS Talking Points: Agricultural Act of 2014

### On February 7<sup>th</sup> 2014, the President enacted the Agricultural Act of 2014 (the Act)

The House and Senate Farm Bill negotiators described the conservation title as follows: *“The Agricultural Act of 2014 consolidates 23 existing conservation programs into 13 programs while strengthening tools to protect and conserve land, water and wildlife. By streamlining programs, the farm bill provides added flexibility and ensures conservation programs are working for producers in the most effective and efficient way – an approach supported by nearly 650 conservation organizations from all 50 states.”*

- The conservation title sends a clear message that congressional members see value in supporting farmers, ranchers and nonindustrial private forest landowners with their natural resource concerns. Although the conservation title provides \$6 billion in savings over a 10-year period (including savings from program streamlining, program reductions, and the sequester), the title remains with substantial funding and opportunity to provide quality assistance to our customers.
- This Farm Bill continues our focus on critical resource concerns – USDA is able to assist farmers, ranchers, non-industrial private forest landowners and other land stewards with addressing the resource issues of today while having the flexibility to address emerging issues.
- The conservation title is strong and contains key new provisions to protect the environment and ensure a healthy balance between maintaining our working lands and providing for agricultural easements.

### **Opportunities for working lands:**

- The **Environmental Quality Incentives Program (EQIP)** is reauthorized to be funded at over \$1 billion annually. Funding begins at over \$1.3 billion in FY2014 and ramps up to over \$1.75 billion by FY 2018. The Wildlife Habitat Incentive Program is rolled into EQIP, however the core mission and focus of these programs enables increased opportunities to address wildlife habitat development through EQIP.
- The **Conservation Stewardship Program (CSP)** is reauthorized to enroll 10 million acres annually. The CSP enrollment level is down from the 12.7 million acre level in the 2008 farm bill, but it remains a substantial contributor toward improving land stewardship across the country. We have over 60 million acres enrolled currently and all contracts have the opportunity to be renewed for an additional 5 years if they address additional priority resource concerns.

March 20, 2014

- Entities who have an interest in protecting working agricultural lands may participate in the **Agricultural Conservation Easement Program (ACEP)** that consolidates the Farm and Ranch Lands Protection Program, Grasslands Reserve Program and Wetlands Reserve Program. The Agricultural Lands Easement component of the program is targeted to working agricultural lands. These working land easements provide for the long-term viability of the nation's food supply by preventing conversion of productive lands to non-agricultural use.

### **Protecting Grasslands and Wetlands:**

- The **Conservation Reserve Program (CRP)** administered by the Farm Service Agency is reauthorized through FY 2018, with modifications. Although the acreage cap is gradually lowered to 24 million acres for fiscal years 2017 and 2018, these 24 million acres will provide substantial environmental benefits. The requirement to reduce rental payments under emergency haying and grazing is eliminated. Rental payment reductions of not less than 25 percent are required for managed haying and grazing, and the rental payment portion of the Grassland Reserve Program enrollment has been incorporated into CRP.
- The Farm Bill re-links **Conservation Compliance** provisions to crop insurance premium subsidies. The agriculture and conservation communities both support this provision. We will work together as a coalition as we move forward with implementation. In addition to identifying crop insurance as a covered program, the Farm Bill provides special timelines and mitigation authority to transition producers to new requirements.
- USDA also has a new opportunity to assist producers with wetland conservation compliance issues on their farms and ranches. The mitigation bank pilot provision has been modified to require the Secretary work with third parties to establish a mitigation bank to assist producers with compliance with the wetland conservation mitigation requirements and makes available \$10 million for such efforts. This program provides NRCS/USDA with a great opportunity to further promote the establishment of mitigation banks for agriculture lands
- The **Wetlands Reserve Easement component** of the newly authorized ACEP incorporates the purposes of the Wetlands Reserve Program, which enables USDA to protect wetlands. The expanded land eligibility of the working lands component of ACEP enables USDA to protect grasslands.
- Through the Title XI Sodsaver requirement, the Farm Bill also protects native grasslands in six states in the Midwest (Montana, North Dakota, South Dakota, Minnesota, Iowa, and Nebraska). Sodsaver ensures that both native grasslands and wildlife unique to the region are conserved.

### **Regional Priorities and Partnerships:**

- The new **Regional Conservation Partnership Program (RCPP)** consolidates four existing programs into one that will support projects that improve soil quality, water quality, water quantity, air quality, or wildlife habitat in a specific area or region. Consolidated programs include: Chesapeake Bay Watershed Initiative, Cooperative Conservation Partnership Initiative, the Agricultural Water Enhancement Program, and the

March 20, 2014

Great Lakes Basin Program. With this new focus on regional conservation priorities USDA can maintain and strengthen existing regional initiatives while developing new priorities with partnership involvement. This program affords NRCS the opportunity to work in priority areas designated at the national, state and regional levels.

- In addition to the expanded opportunity for partnerships under RCPP, NRCS maintains its ability to work with partners to purchase working land easements and implement a wetland reserve enhancement option under ACEP, obtain partner assistance for delivery of technical assistance, and target resources of priority resource concerns by local stakeholders.

### **Opportunities for Beginning Farmers and Ranchers, Historically Underserved Producers and Veterans:**

- **Conservation Reserve Program (CRP):** The 2014 Act continues the Transition Incentives Program (TIP) to facilitate the transfer of land under a CRP contract from retiring farmers to beginning farmers and ranchers by allowing conservation and land improvements during the last year of the CRP contract. TIP now includes eligibility for military veterans who are beginning farmers or ranchers.
- **Environmental Quality Incentives Program (EQIP):**
  - The 2014 Act maintains the EQIP authority for beginning farmers and ranchers, along with other historically underserved producers (limited resource farmer and ranchers, socially disadvantaged farmers and ranchers, and veteran farmer and ranchers), to receive up to 90 percent of the cost for practice implementation.
  - The 2014 Act also expands EQIP authority to provide advance payments to beginning farmer and ranchers and other historically underserved producer by—
    - Increasing the amount of assistance available for advanced payment from 30 percent to 50 percent.
    - Providing flexibility regarding repayment of advanced payment if the funds are not expended within 90 days.
- **Conservation Stewardship Program (CSP) and EQIP:** The Agricultural Act of 2014 extends the reservation of 5 percent of CSP acres and 5 percent of EQIP funds for beginning farmers and ranchers until FY 2018, including a new preference for beginning farmers and ranchers who are also veterans.
- **Agricultural Conservation Easement Program (ACEP):** The 2014 Act reduced the land tenure requirement from 7 years under the former Wetlands Reserve Program to 24 months under the wetlands reserve easement component of ACEP, expanding the opportunity for beginning farmers and ranchers to participate.

March 20, 2014

- All Conservation Programs:

- The 2014 Act maintained existing administrative provision that authorizes the Secretary to provide incentives to beginning farmers and ranchers and other historically underserved producers to participate in any USDA conservation program.

**Program Streamlining:**

- Special streamlining provisions give NRCS an opportunity to rethink how it delivers its conservation programs. Our goal is to use this opportunity to further improve our efficiency, streamline administration and reduce burden on the public and our field staff.
- Consolidation, by reducing administrative complexity, assists private landowners to understand more clearly the program options available to them and NRCS can focus more of its efforts to providing its customers with quality assistance.

**Other Messages:**

- **Financial management** – NRCS farm bill funding is switched from annual funding to “no-year” funding, which provides the agency the opportunity to improve its focus more directly on the conservation planning process and more deliberate obligation of funding.
- **Watershed Rehabilitation** – NRCS received \$250 million in no-year funding with the potential to receive additional funding in later years.
- NRCS and its customers continue to have the opportunity to use **Technical Service Providers** in the delivery of its programs.



**U.S. GEOLOGICAL SURVEY SUMMARY SHEET  
ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS  
WATER SCIENCE CENTERS**

**RED RIVER COMPACT COMMISSION  
34<sup>th</sup> Annual Meeting**

**Embassy Suites Hotel  
Hot Springs, AR  
April 22, 2014**

**RED RIVER BASIN**

	PEAK DISCHARGE (CFS)		AVERAGE DISCHARGE (CFS)	
	MAXIMUM	WY 13	PERIOD OF RECORD	WY 13
07308500 RED RIVER NR BURKBURNETT, TX	174,000 06-06-1995	2,650 06-22-13	1,120 53 YRS	71.6
07315500 RED RIVER NR TERRAL, OK	236,000 06-07-1995	6,640 07-29-13	2,343 75 YRS	215
07316000 RED RIVER NR GAINESVILLE, TX	265,000 05-31-1987	5,700 07-31-13	3,080 77 YRS	241
07331600 RED RIVER AT DENISON, TX	201,000 05-21-1935	7,180 10-12-12	4,594* 60 YRS+	533
07335500 RED RIVER AT ARTHUR CITY, TX	400,000 05-28-1908	24,000 05-24-13	8,829* 69 YRS++	1,989
07336820 RED RIVER NEAR DE KALB, TX	279,000 05-06-1990	38,900 05-25-13	13,480 45 YRS	3,553
07337000 RED RIVER AT INDEX, AR	297,000 02-23-1938	33,600 05-27-13	12,550* 70 YRS+++	3,728
07344370 RED RIVER AT SPRING BANK, AR	140,000 03-14-2001	46,700 06-08-13	18,450* 16 YRS	6,716

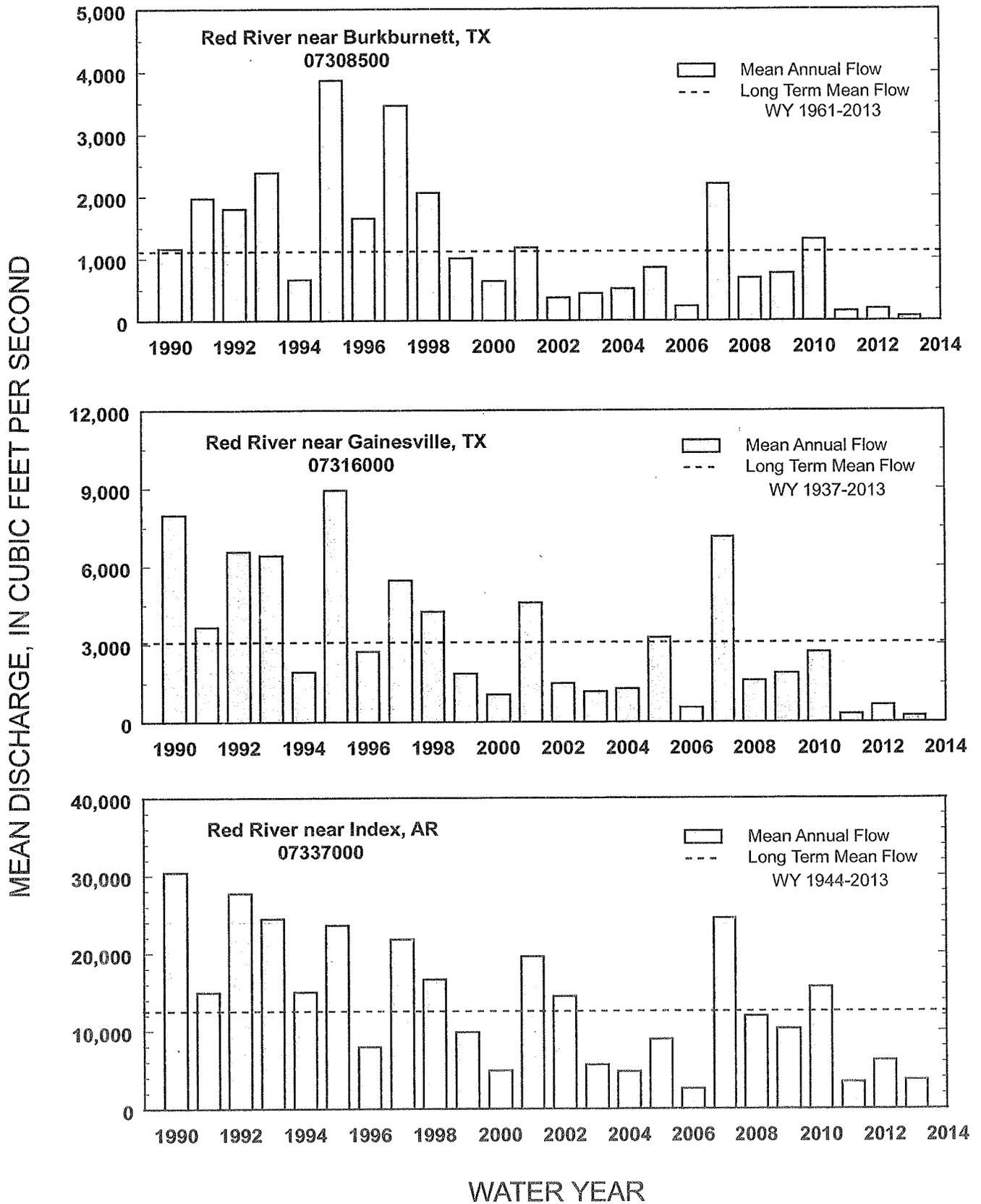
\* AVERAGE DISCHARGE SINCE DENISON DAM IN OPERATION

+ 80 TOTAL YEARS OF RECORD

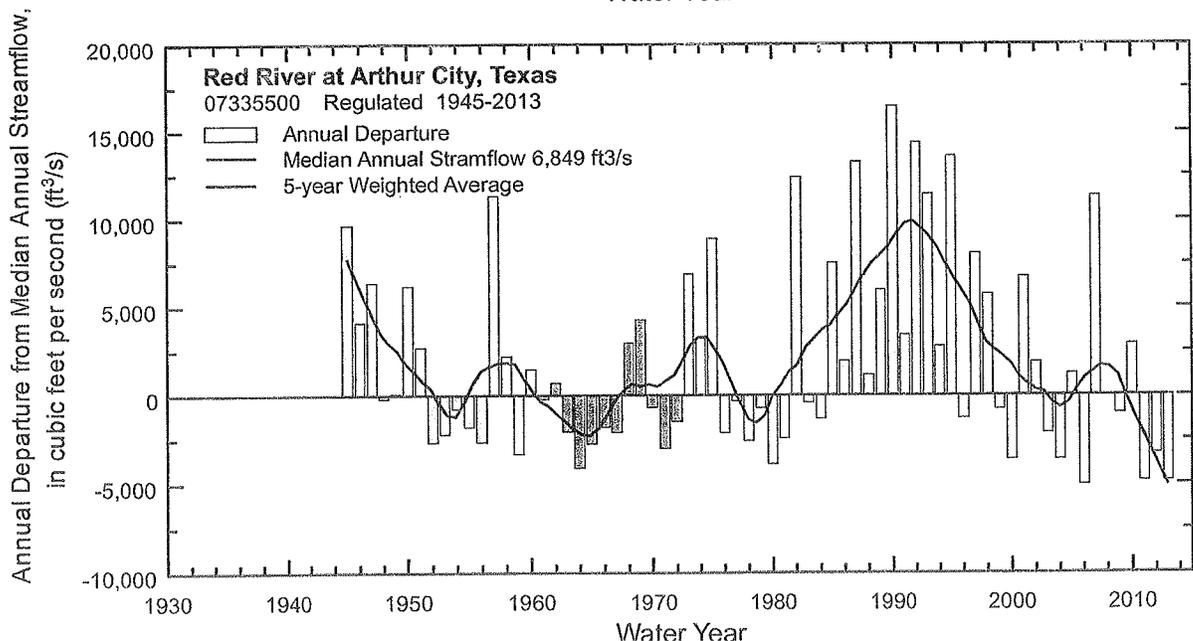
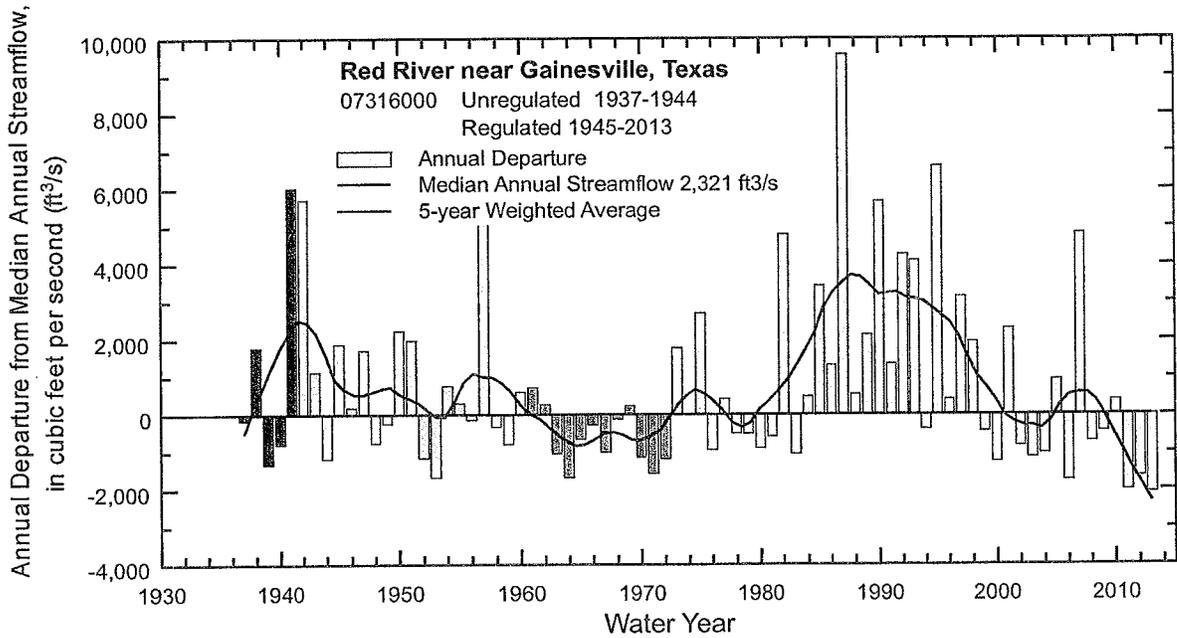
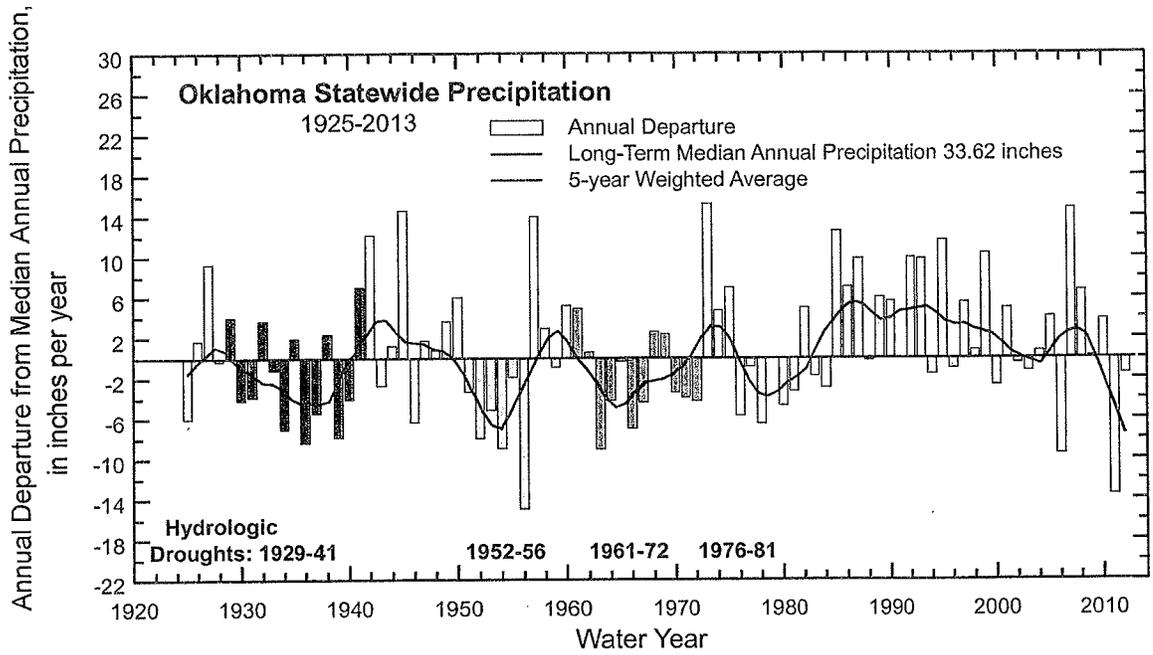
++ 81 TOTAL YEARS OF RECORD

+++ 75 TOTAL YEARS OF RECORD

## RED RIVER BASIN TRENDS IN STEAMFLOW



# LONG-TERM RED RIVER BASIN TRENDS IN STREAMFLOW





# RECLAMATION

*Managing Water in the West*

## **Reclamation Summary of Current and Recently Completed Activities**

**Planning, Construction Assistance, and Grant Programs  
Oklahoma-Texas Area Office**



U.S. Department of the Interior  
Bureau of Reclamation  
Great Plains Region

April 20<sup>14</sup>

## Mission Statements

The mission of the *Department of the Interior* is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the *Bureau of Reclamation* is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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## **Introduction**

The Bureau of Reclamation (Reclamation) is an agency within the Department of the Interior with a primary mission designated to manage, develop, and protect water and related resources in an environmentally and economically sound manner within the 17 western states. The Oklahoma-Texas Area Office (OTAO) is responsible for administering 11 reservoir projects and associated water distribution systems in southern Kansas, Oklahoma, and Texas. The combined water delivery is more than 680,000 acre-feet (ac-ft) of Municipal and Industrial (M&I) water annually to approximately three million water users, providing additional fish and wildlife, recreation, and flood control benefits. The OTAO supports two Irrigation Districts, one in Oklahoma and one in Texas.

Reclamation works in conjunction with other federal and state agencies, Indian Tribes, and local entities in performing these responsibilities. Significant areas of activity include providing oversight of operations and maintenance of existing facilities and water resources planning along with construction assistance.

The purpose of this activity report is to provide a summary of current and recently completed activities under the Planning, Construction Assistance, and Grant Programs.

## **Native American Affairs Program**

Three projects were completed in FY 13:

- Muscogee Creek Nation - Infrastructure Needs Assessment, OK.
- Citizen Potawatomi Nation - Data Gap Analysis for Tribal Water Plan, OK.
- Kickapoo Tribe of Oklahoma - Data Gap Analysis for Development of a Water Plan, OK.

Four projects were initiated in FY13, totaling \$198,000 in Federal funding:

- Caddo Nation - Baseflow Measurement and Analysis of the Groundwater Component of Streamflow Overlying the Rush Springs Aquifer, OK.
- Choctaw and Chickasaw Nations – Drinking Water Disinfection Byproduct Guidelines, OK.
- Iowa Tribe of Oklahoma - Water Use and Capacity, Quality and Age of Groundwater, OK.
- South Central Tribes Training - Elements of Tribal Water Planning, Ecologic Flows, and Climate Change, OK.

One project was initiated in FY14, totaling \$45,000 in Federal funding:

- Cherokee nation Engineering Study on Cherokee County Rural Water District No. 9.

## **Rural Water Supply Program**

The City of Sulphur, OK was awarded \$190,098 in FY 11 to complete an appraisal investigation on surface water supply alternatives to convey water from Lake of the Arbuckles to the City of Sulphur for alleviation of projected water supply deficits and long-term withdrawal imbalances by pumping of water from the Arbuckle-Simpson Aquifer. The study was conducted by Reclamation and completed in December 2013.

## Water Conservation Field Services (WCFS) Program

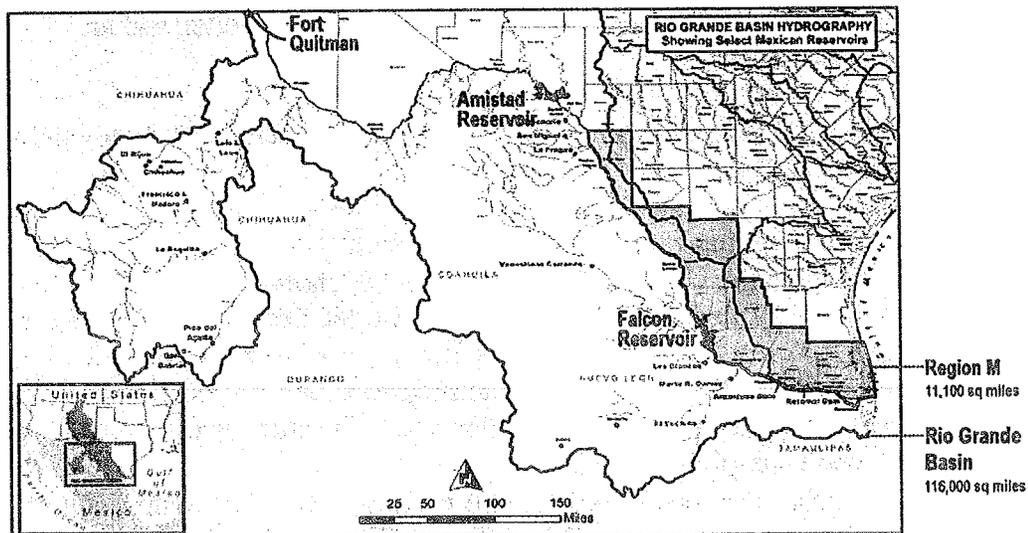
### *WCFS Grants*

- Two grants were awarded in FY 13, totaling \$199,987 in Federal funds:
  - Foss Reservoir Master Conservancy District, Foss Division, Washita Basin Project, OK (\$99,987): Design and Installation of Isolation Valves on the Foss Aqueduct and Distribution System.
  - Foss Reservoir Master Conservancy District, Foss Division, Washita Basin Project, OK (\$100,000): The Demonstration Test of a Microfiltration and Reverse Osmosis System for Foss Reservoir Water Treatment Plant.

## WaterSMART Program

### *Basin Study Program*

Reclamation and the Rio Grande Regional Water Authority (RGRWA), with the 53 member entities making up the RGRWA, in collaboration with other Texas water and environmental agencies and the International Boundary and Water Commission (IBWC), completed a Basin Study to evaluate the impacts of climate variability and change on water supply imbalances within an eight county region (“Region M”) along the U.S./Mexico border in south Texas. Water supplies in the area are primarily from the Rio Grande, with much of the drainage located in Mexico and regulated by releases from the Falcon and Amistad Reservoirs which are managed by the IBWC, in compliance with the 1944 U.S. Mexico Water Treaty. Much of the water deliveries in the study area are made through a network of canals which are managed by 27 different Irrigation Districts.



The basin study:

- Found climate change is likely to result in increased temperatures, decreased precipitation and increased evapotranspiration in the study area. As a result, in addition to the 592,084 acre-feet per year of supply shortfall predicted in the existing regional planning process in 2060, it is projected that an additional 86,438 acre-feet per year will be needed due to climate change.
- Found supply imbalances exacerbated by climate change will greatly reduce the reliability of deliveries to all users who are dependent on deliveries of Rio Grande water via irrigation deliveries. For example, only about 40 percent average volume reliability of Class B interruptible irrigation and mining water rights would be achieved in the middle range of future condition scenarios.
- Developed a planning objective to alleviate projected water supply imbalances in the study area by developing one or more alternatives in Cameron, Willacy and Hidalgo Counties that will provide a minimum of 86,438 acre feet of water year round by 2060, protect existing water rights, be compatible with regulations, policies and environmental law, and be implementable with the reasonable control of study sponsors.
- Acknowledged that all water management strategies recommended through the recently adopted regional water plan are part of a needed portfolio of solutions for the Study Area.
- Examined seawater desalination, brackish groundwater desalination, reuse and fresh groundwater development; and found that brackish groundwater development was recommended as being most suitable for preliminary engineering and affordability analysis.
- Further developed brackish groundwater desalination and recommended three generalized locations for future desalination plants, which were analyzed using the Texas Water Development Board's Unified Costing Model, and an affordability analysis.

The study cost \$412,798 (52 percent RGWRA; 48 percent Federal cost share) and was completed December, 2013.

Reclamation has two on-going Basing Studies in the area:

- A Basin Study on the Upper Washita Basin in Oklahoma was recently awarded \$350,000 in FY 12 Federal funds to partner with the Oklahoma Water Resources Board (OWRB) and Fort Cobb and Foss Reservoir Master Conservancy Districts to identify sustainable solutions to infrastructure issues and existing and projected imbalances between water supply and demand. The study is estimated at a cost of \$900,000 upon completion.
- A Plan of Study for a Basin Study on the Arkansas River in southwest Kansas and eastern Colorado was awarded \$100,000 in Federal funds to partner with the Kansas Water Office (KWO), Kansas Department of Health and Environment (KDHE), and Southwest Kansas Groundwater Management District No. 3 (GMD3) to identify cost share partners, goals, and objectives for the submittal of a Basin Study.

### ***WaterSMART Grants***

- Three new WaterSMART Grants were awarded in the OTAO, totaling \$1,636,290 in FY13 funds. These on-going projects include:

No.	Recipient	Scope	Award Date (FY)	Federal Share (\$)	Total Cost (\$)	Water Saved (ac-ft/yr)	Energy Saved (kwh/yr)
1	United Irrigation District, TX	Canal Improvements, wind powered pump, and wildlife restoration	2013	\$1,333,901	\$2,778,961	2,512	310,630
2	Cameron County Irrigation District #2, TX	Installation of nine automated gates	2013	\$224,889	\$641,169	4,484	117,525
3	Rio Grande Regional Water Authority, TX	Installation of Surge Vales for irrigation	2013	\$77,500	\$155,000	1,634	-
			<b>Total</b>	<b>\$1,636,290</b>	<b>\$3,575,130</b>	<b>8,630</b>	<b>428,155</b>

### **Science and Technology Program**

#### ***Variable Salinity Source Desalination Pilot Study***

- This study aimed to apply concepts being developed at the Singapore Public Utility Board state-of-the-art Variable Salinity Plant towards development of the first flexible desalination system in the U.S. along the Gulf Coast of Texas. Initial phases of this study were completed in FY 10 and FY 11, which included an evaluation of the composition of potential source waters; identification of piloting system features to treat various feed waters with the most flexibility and efficiency; and actual pilot testing of brackish groundwater at the southernmost Regional Desalination Plant. In FY 12, a pilot test for seawater was completed at South Padre Island. The report was completed in FY 14 to document each phase of the project. The final report is posted on Reclamation's website and can be downloaded at [www.usbr.gov/research/publications/download\\_product.cfm?id=866](http://www.usbr.gov/research/publications/download_product.cfm?id=866).

#### ***An Innovative Constructed Wetland Design for Attenuating Endocrine Disrupting Compounds from Reclaimed Wastewater***

- Some major concerns with indirect potable reuse still exist as a water supply strategy across the U.S. One of these concerns is the potential of estrogens and other endocrine disrupting chemicals (EDCs) in reclaimed wastewater that adversely affect ecological or human health. It is important to address the issue of EDCs in reclaimed wastewater and evaluate the potential of using environmental buffers as a resource management tool to further attenuate EDC concentrations. Although wetland processes can naturally attenuate EDCs, the rate of removal has not been verified or optimized at the demonstration scale. In fact, the Texas Water Development Board's (TWDB) 2011 Water Reuse Research Agenda identified this issue as the second highest research priority for Texas.

A collaborative, Federal-state-local partnership has been formed to design, construct, and monitor the Brazos River Demonstration Wetland in cooperation with Reclamation's Technical Service Center and the Oklahoma-Texas Area Office; United States Geological Service (USGS); TWDB; Waco Water Utilities Services Department; and Baylor University. Funds were provided through the Science and Technology Program to investigate potential sites, develop a monitoring plan, prepare the final design, and perform baseline monitoring. Funds for the construction of the Brazos River Demonstration Wetland at the Waco Metropolitan Area Regional Sewerage System will be provided through the City of Waco (70%) and additional sources (TBD).

***Developing a Deterministic Model for Predicting Cleaning Frequency due to Inorganic Scaling on Reverse Osmosis Membranes***

- This research will address the need to further understand and characterize challenges related to inorganic scaling of reverse osmosis membranes. The two year research project will result in the production of a technical report, a publically available cleaning model, and a journal publication. The technical report will focus on conveying treatment plant information collected as a part of this study, the model for inorganic fouling, cleaning frequency curves, and estimated operating costs. The journal publication will focus on the determination of membrane fouling propensity and indicators of inorganic scaling from brackish groundwater resources. The goal of this publication is to link the theoretical and fundamental fouling mechanisms by practical indicators to anticipate fouling and decrease uncertainty in operation and cleaning frequency.

**Desalination and Water Purification Research**

***City of Corpus Christi Desalination Pilot Study.***

- The City of Corpus Christi, Texas, was awarded \$200,000 in FY 2013 for a Desalination Pilot Study. Corpus Christi has been dealing with drastic drought conditions over the last decade and this pilot project will aid in exploring a variety of options to optimize the pre-treatment process. The results will form the basis of design for a full-scale facility including operating parameters, cost information and product water quality to assess feasibility of a seawater and/or brackish groundwater supply.

**Drought Program**

Reclamation staff worked with the states of Kansas, Oklahoma, and Texas; partnering state and Reclamation expertise to leverage funds under the now-expired Title II of the Reclamation States Emergency Drought Relief Act. The resultant projects provide a one-stop internet-based and interactive Tool for Planning Temporary Water Supply Response in Drought Emergencies (Tool). A Tool for all three states was completed in 2013.

Authorization of funding for planning-related activities under the Reclamation States Emergency Drought Relief Act expired on September 30, 2012.

## **Summary of Programs and Funding Opportunities**

All Reclamation program Funding Opportunity Announcements (FOA) for Grants or Cooperative Agreements to utilize Reclamation funding are posted on the Grants.gov website: <http://www.grants.gov/>

The following is a list of specific weblinks for each of the Reclamation programs mentioned above:

Native American Affairs Program: <http://www.usbr.gov/native/>

Rural Water Supply Program: <http://www.usbr.gov/ruralwater/>

Water Conservation Field Services Program: <http://www.usbr.gov/waterconservation/>

WaterSMART Program: <http://www.usbr.gov/WaterSMART/>

WaterSMART Program - Title XVI: <http://www.usbr.gov/WaterSMART/title/index.html>

WaterSMART Program – Basin Studies: <http://www.usbr.gov/WaterSMART/bsp/>

Science and Technology Program: <http://www.usbr.gov/research/science-and-tech/>

Drought Program: <http://www.usbr.gov/drought/>

### Contact Information

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**RECLAMATION**  
*Managing Water in the West*



# RED RIVER VALLEY ASSOCIATION

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629 SPRING STREET  
P.O. BOX 709  
SHREVEPORT, LA 71162-0709  
(318) 221-5233

April 22, 2014

TO: Red River Compact Commissioners

FM: Richard Brontoli, Executive Director, [redriverva@hotmail.com](mailto:redriverva@hotmail.com)

RE: Red River Valley Association Report to the Red River Compact, April 22, 2014

- 1. Earmarks:** The no earmark policy, in the House and Senate, continues to be an issue. The Administration decides which projects and the funding level they receive. Congress needs to take back their responsibility for the appropriation process. They also need to redefine the earmark definition, since civil works projects have been through an authorization, vetted process. Enclosure 1 is our position paper on earmarks.
- 2. Appropriations:** Congress passed the Consolidated Appropriation Act, 2014, which had provisions for 'Additional Funds'. We appreciate that the Corps allocated an additional \$1,908,750 for FY 2014 O&M on the J. Bennett Johnston Waterway that will be used for dredging. We are disappointed that the President's FY 2015 budget submission reduced the Corps of Engineers by \$906,500,000; a 17% reduction from what Congress enacted in FY 2014. It is obvious the intent of Congress is to fund waterway projects. It is apparent that the Administration may talk about infrastructure projects, but the fourth R, rivers, is not included with the other Rs; roads, rail and runways. The Red River civil works President's budget are detailed in enclosure 2.
- 3. Navigation O&M:** The FY 2015 budget proposal of \$8,388,000, for O&M for the J. Bennett Johnston Waterway, is \$535,000 less than the FY 2014 budget proposal and \$2,315,750 less than enacted in FY 2015 (\$10,703,750). This is far short of the \$11 million basic, minimum requirement to maintain the Waterway at the authorized 9' by 200' channel. Reduced funding of this magnitude guarantees the waterway will be closed in FY 2015. This reduction will jeopardize dredging funds threatening the reliability of the Waterway and will impact industries.
- 4. IMTS-Reduced Lock Service Mandate:** We would like to express our deepest appreciation to Col. John Cross and the Vicksburg District staff. Col. Cross toured the ports and facilities on the Red River. After an analysis, by the Vicksburg staff, Col Cross decided to allow our locks to remain operating 24/7/365 for the next year. We know there will be a re-evaluation each year and we must show increased activity. The public ports, State of Louisiana, Red River Waterway Commission, communities and private industries have invested approximately \$2.8 billion in infrastructure. This is more than the federal investment of \$1.9 billion, a testament to the efforts to make the Waterway a success. Enclosure 3 includes: a. the infrastructure investment, b. the 2013 economic study summary and c. fact sheets on the two newest industries at Red River ports; Benteler Steel & Cool Planet.
- 5. Navigation into Arkansas Feasibility Study:** The Arkansas Legislators took all the funds from the Arkansas Red River Commission trust funds. This prevented them from providing the \$1 million contributed funds to get to a decision point to continue or terminate the study. Currently the Commission is working to get the Red River into the Arkansas State Water Plan.
- 6. Chloride Control Project:** There is no action on this project. The Administration will not fund this project. Construction on the Wichita River will not resume until the earmark ban is changed. GEM has made any progress on getting power contracts in order to secure private funding for their 'solar pond' initiative.
- 7. Bureau of Reclamation & NRCS Appropriations:** Enclosure 4 is the FY 2014 & 2015 appropriation status.
- 8. Americas Watershed Initiative:** Enclosure 5 is info on this organization and the first workshop is 14-15 May.
- 9. Giant Salvinia:** This invasive weed has become a major problem in Texas & Louisiana. Enclosure 6 is info.

Enclosure 1

Red River Valley Association  
P.O. Box 709  
Shreveport, LA 71162  
(318) 221-5233

February 4, 2013

Position Paper

RE: Definition of a Civil Works Earmark

There are varying opinions on the definition of an 'earmark' in appropriation bills. This will have a great impact for the Civil Works portion of the Energy and Water Development Appropriation Bill. There is a major difference between an unauthorized earmark 'parachuted' into a bill and authorized earmarks.

1. Formal Project Development/Authorization Process: Civil Works projects go through a process; reconnaissance study, feasibility study, benefit to cost ratio test, EIS, peer review, review by agencies, public review and comment, final Chief of Engineer approval, authorization by both Houses of Congress in a WRDA bill and signed by the President. No other federal program goes through such a rigorous approval process. Each justified project 'stands alone', are proven to be of national importance and should be funded by project.

2. Local Sponsor Cost-share: For many projects there is a local sponsor cost sharing responsibility during the feasibility study, construction and for O&M. Those who have contributed, in most cases, millions of dollars to the process, must have the ability to have a voice for their projects to get funded. That voice is through their Congressional delegation.

3. An Issue of Priorities: With limited federal funding all authorized projects cannot be funded. The issue becomes one of priorities and the only way our delegation can express that is through 'Congressional Requests', which are considered earmarks. If Congress provides a lump sum appropriation, to the Corps, for GI, CG and O&M, OMB and the Administration will determine what projects get funded, with no input from Congress.

4. Appropriation Process: The appropriation process is the constitutional responsibility of Congress and they are turning it over to the Administration. They were elected to decide how to spend federal funds. The Budget Committee sets the funding levels and the Appropriation Committee allocates and prioritizes funding. It is not earmarks that 'busts' the budget, it is the lack of discipline to stay within the budget.

5. O&M Funding Levels: This is the most serious problem. If the Congressional delegation does not have input into funding levels the fate of our Waterway is left up to the Administration. All the economic development and industries created will be threatened if adequate O&M (dredging) funding is not received. Congress has a responsibility to the communities and local sponsors to keep their commitment to maintain a completed project.

6. Recommendation: The appropriation subcommittees should ask for 'Member Requests'. It is then the responsibility of the subcommittee staff to determine what is an 'earmark', which should not be funded, and what is an authorized projects. Then the subcommittees can determine which projects are funded and at what funding level.

We believe that GI, CG & O&M Projects should be funded by line item project and are NOT earmarks, as long as they have gone through the authorization process. Civil Works projects are too important to leave up to OMB to prioritize. Congress must keep the ability to determine what projects get funded and be able to represent their constituents.

RRVA POC: Richard Brontoli, Executive Director  
(318) 221-5233, [redriverva@hotmail.com](mailto:redriverva@hotmail.com)

<b>RED RIVER VALLEY ASSOCIATION FY 2015 APPROPRIATIONS (\$000) CIVIL WORKS</b>				
<b><u>I. Studies (GI)</u></b>	<b>FY 14 Approp</b>	<b>RRVA FY 15 Request</b>	<b>Pres FY 15 Budget</b>	<b>Local Sponsor Requirements</b>
1. Navigation into SW Arkansas: Feasibility	-0-	302	-0-	(ARRC)
2. Red River Waterway, LA – 12' Channel, Recon	-0-	100	-0-	(RRWC)
3. Bossier Parish, LA	-0-	270	-0-	(Bossier Levee)
4. SE Oklahoma Water Resource Study: Feasibility	-0-	500	-0-	(OWRB)
5. Washita River Basin, OK	-0-	500	-0-	(OWRB)
6. SW Arkansas Ecosystem Restoration: Recon Study	-0-	47	-0-	(ANRC / AR Game & Fish)
7. Cypress Valley Watershed, TX	-0-	175	-0-	(NETWD)
8. Sulphur River Basin, TX	500	1,000	600	(Sulphur Authority)
9. Wichita River Basin above Lake Kemp, TX: Recon	-0-	100	-0-	(L)
10. Red River Above Denison Dam, TX & OK: Recon	-0-	100	-0-	(L)
11. Red River Waterway, Index, AR to Denison Dam	-0-	100	-0-	(?)
12. Mountain Fork River Watershed, OK & AR, Recon	-0-	-0-	-0-	(?)
13. Walnut Bayou, Little River, AR	-0-	100	-0-	(ANRC)
14. Little River County/Ogden Levee, AR, Recon	-0-	100	-0-	(ANRC)
15. Red River Waterway, Index to Denison, Bendway	-0-	-0-	-0-	(?)
<b><u>II. Construction General (CG)</u></b>				
1. Red River Waterway: J. B. Johnston Waterway, LA		21,100	-0-	(RRWC)
2. Chloride Control Project, TX & OK Texas - 7,500 / Oklahoma - 800	-0-	9,293 7,200- TX 2,093- OK	-0-	N/A
3. Red River Below Denison Dam; AR & LA a. Bowie County Levee, TX	-0-	12,000 -0-	-0-	(Levee Districts)
4. Red River Emergency Bank Protection	-0-	20,200	-0-	(Levee Districts)
5. McKinney Bayou, AR, PED	-0-	-0-	-0-	(?)
<b><u>III. Continuing Authority Program (CAP)</u></b>				
1. Big Cypress Valley Watershed, TX: Section 1135	-0-	-0-	-0-	(Jefferson)
2. Palo Duro Creek, Canyon, TX: Section 205	-0-	100	-0-	(Canyon, TX)
3. Millwood, Grassy Lake, AR: Section 1135	-0-	100	-0-	(ANRC)
4. Miller County Levee, AR, Sec 1135	-0-	-0-	-0-	(Miller Levee)
5. OK Comprehensive Water Plan, Sec 22	-0-	500	-0-	OWRB

NOTES: Local Sponsor Column – Sponsor indicated in ( ); (?) indicates No Sponsor identified and need one to continue (L) indicates Sponsor not required now but need one for feasibility; N/A – No Sponsor required.

## RED RIVER VALLEY ASSOCIATION

## CIVIL WORKS PROJECTS

OPERATIONS AND MAINTENANCE (O&M)

FY2015 (\$000)

Project	President FY14	RRVA Request	President FY15
DeQueen Lake, AR	1,902	3,393	1,912
Dierks Lake, AR	1,586	2,213	1,631
	+50		
Gillham Lake, AR	1,735	2,000	1,509
Millwood Lake, AR	2,706	6,690	2,691
Bayou Bodcau Reservoir, LA	1,204	1,891	1,277
Bayou Pierre, LA	23	36	23
Caddo Lake, LA	207	522	204
Wallace Lake, LA	222	997	217
J. Bennett Johnston Waterway, LA	8,795	25,633	8,260
Basic Annual O&M	+1,908,75	12,230	
Backlog Maintenance	0	13,403	
Old River, LA (MR&T)	8,118	21,647	8,388
Broken Bow Lake, OK	5,704	11,954	3,275
Hugo Lake, OK	2,866	2,866	1,828
Pine Creek Lake, OK	1,279	1,579	1,884
Sardis Lake, OK	1,412	1,412	1,039
Waurika Lake, OK	1,340	1,340	1,173
	+75		
Chloride Control, Area VIII, TX	1,591	1,629	1,827
Denison Dam & Lake Texoma, TX	11,227	16,527	11,224
Basic Annual O&M	+60	15,827	
Backlog Maintenance		700	
Estelline Springs, TX	43	45	40
Lake Kemp, TX	285	285	260
Pat Mayse Lake, TX	1,004	1,154	1,393
Jim Chapman Lake, TX	1,758	4,553	1,957
Lake of the Pines, TX	3,400	8,848	3,432
Wright Patman Dam & Lake, TX	4,511	12,888	3,486

NOTE: Additional funds received from the FY14 Omnibus Bill 'additional funds' provision indicated by +xxxx

**Red River: J. Bennett Johnston Waterway**  
**Public Port Infrastructure (In-Place)**  
**As of CY 2013**

<u>Funding Type</u>	<u>Caddo/Bossier</u>	<u>Natchitoches</u>	<u>Alexandria</u>	<u>Red River</u>	<u>Total</u>
LA Port Priority, Capital Outlay, Grants & Ports	\$131,786,449	\$7,600,000	\$17,800,000	\$2,646,000	\$159,832,449
RRWC	\$28,213,551	\$9,306,822	\$1,797,109	\$3,516,566	\$42,834,048
Other (Private/Bonds)	\$500,000,000	\$25,420,000	\$25,500,000	\$2,515,000	\$553,435,000
<b>Total</b>	<b>\$660,000,000</b>	<b>\$42,326,822</b>	<b>\$45,097,109</b>	<b>\$8,677,566</b>	<b>\$756,101,497</b> W/O Benteler

NOTE: 1. Caddo/Bossier Port information shown does NOT include a \$900,000,000 investment by Benteler Steel, which is under construction (see attached overview).  
 2. Table does NOT include \$168,000,000 for Cool Planet, 2/3 to be spent at Alexandria & Natchitoches Ports.

**Private Terminals**  
**Capital Investment**

Two (2) Private Terminals CLECO	\$ 6,000,000 \$80,000,000 for river terminal facility (part of a new \$1 Billion power plant)
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Total Investment: \$756.1 m – Public Ports  
 \$ 6.0 m – Private Terminals  
 \$900.0 m – Benteler Steel  
 \$1,000.0 m – CLECO  
 \$112.0 m – Cool Planet (2 of 3 plants, \$168 m total, at Alexandria & Natchitoches Ports)  
 \$2,774.1 m – Total (Approximately \$2.8 billion)

The Federal funding for the J. Bennett Johnston Waterway is approximately \$2 billion. Private, State, port and RRWC investment exceeds the Federal appropriations.



**RED RIVER COMPACT**

**ARKANSAS-LOUISIANA-OKLAHOMA-TEXAS**

**MAY 12, 1978**

## PREAMBLE

The States of Arkansas, Louisiana, Oklahoma, and Texas, pursuant to the acts of their respective Governors or Legislatures, or both, being moved by considerations of interstate comity, have resolved to compact with respect to the water of the Red River and its tributaries. By Act of Congress, Public Law No. 346 (84th Congress, First Session), the consent of the United States has been granted for said states to negotiate and enter into a compact providing for an equitable apportionment of such water; and pursuant to that Act the President has designated the representative of the United States.

Further, the consent of Congress has been given for two or more states to negotiate and enter into agreements relating to water pollution control by the provisions of the Federal Water Pollution Control Act (P.L. 92-500, 33 U.S.C. §§ 1251 et seq.).

The Signatory States acting through their duly authorized Compact Commissioners, after several years of negotiations, have agreed to an equitable apportionment of the water of the Red River and its tributaries and do hereby submit and recommend that this Compact be adopted by the respective Legislatures and approved by Congress as hereinafter set forth:

ARTICLE I

PURPOSES

SECTION 1.01 The principal purposes of this Compact are:

- (a) To promote interstate comity and remove causes of controversy between each of the affected states by governing the use, control and distribution of the interstate water of the Red River and its tributaries;
- (b) To provide an equitable apportionment among the Signatory States of the water of the Red River and its tributaries;
- (c) To promote an active program for the control and alleviation of natural deterioration and pollution of the water of the Red River Basin and to provide for enforcement of the laws related thereto;
- (d) To provide the means for an active program for the conservation of water, protection of lives and property from floods, improvement of water quality, development of navigation and regulation of flows in the Red River Basin; and
- (e) To provide a basis for state or joint state planning and action by ascertaining and identifying each state's share in the interstate water of the Red River Basin and the apportionment thereof.

## ARTICLE II

### GENERAL PROVISIONS

SECTION 2.01 Each Signatory State may use the water allocated to it by this Compact in any manner deemed beneficial by that state. Each state may freely administer water rights and uses in accordance with the laws of that state, but such uses shall be subject to the availability of water in accordance with the apportionments made by this Compact.

SECTION 2.02 The use of water by the United States in connection with any individual Federal project shall be in accordance with the Act of Congress authorizing the project and the water shall be charged to the state or states receiving the benefit therefrom.

SECTION 2.03 Any Signatory State using the channel of Red River or its tributaries to convey stored water shall be subject to an appropriate reduction in the amount which may be withdrawn at the point of removal to account for transmission losses.

SECTION 2.04 The failure of any state to use any portion of the water allocated to it shall not constitute relinquishment or forfeiture of the right to such use.

SECTION 2.05 Each Signatory State shall have the right to:

- (a) Construct conservation storage capacity for the impoundment of water allocated by this Compact;
- (b) Replace within the same area any storage capacity recognized or authorized by this Compact made unusable by any cause, including losses due to sediment storage;
- (c) Construct reservoir storage capacity for the purposes of flood and sediment control as well as storage of water which is either imported or is to be exported if such storage does not adversely affect the delivery of water apportioned to any other Signatory State; and
- (d) Use the bed and banks of the Red River and its tributaries to convey stored water, imported or exported water, and water apportioned according to this Compact.

SECTION 2.06 Signatory States may cooperate to obtain construction of facilities of joint benefits to such states.

SECTION 2.07 Nothing in this Compact shall be deemed to impair or affect the powers, rights, or obligations of the United States, or those claiming under its authority, in, over and to water of the Red River Basin.

SECTION 2.08 Nothing in this Compact shall be construed to include within the water apportioned by this Compact any water consumed in each state by livestock or for domestic purposes; provided, however, the storage of such water is in accordance with the laws of the respective states but any such impoundment shall not exceed 200 acre-feet, or such smaller quantity as may be provided for by the laws of each state.

SECTION 2.09 In the event any state shall import water into the Red River Basin from any other river basin, the Signatory State making the importation shall have the use of such imported water.

SECTION 2.10 Nothing in this Compact shall be deemed to:

- (a) Interfere with or impair the right or power of any Signatory State to regulate within its boundaries the appropriation, use, and control of water, or quality of water, not inconsistent with its obligations under this Compact;
- (b) Repeal or prevent the enactment of any legislation or the enforcement of any requirement by any Signatory State imposing any additional conditions or restrictions to further lessen or prevent the pollution or natural deterioration of water within its jurisdiction; provided nothing contained in this paragraph shall alter any provisions of this Compact dealing with the apportionment of water or the rights thereto; or
- (c) Waive any state's immunity under the Eleventh Amendment of the Constitution of the United States, or as constituting the consent of any state to be sued by its own citizens.

SECTION 2.11 Accounting for apportionment purposes on interstate streams shall not be mandatory under the terms of the Compact until one or more affected states deem the accounting necessary.

SECTION 2.12 For the purposes of apportionment of the water among the Signatory States, the Red River is hereby divided into the following major subdivisions:

- (a) Reach I - the Red River and tributaries from the New Mexico-Texas state boundary to Denison Dam;
- (b) Reach II - the Red River from Denison Dam to the point where it crosses the Arkansas-Louisiana state boundary and all tributaries which contribute to the flow of the River within this reach;
- (c) Reach III - the tributaries west of the Red River which cross the Texas-Louisiana state boundary, the Arkansas-Louisiana state boundary, and those which cross both the Texas-Arkansas state boundary and the Arkansas-Louisiana state boundary;
- (d) Reach IV - the tributaries east of the Red River in Arkansas which cross the Arkansas-Louisiana state boundary; and
- (e) Reach V - that portion of the Red River and tributaries in Louisiana not included in Reach III or in Reach IV.

SECTION 2.13 If any part or application of this Compact shall be declared invalid by a court of competent jurisdiction, all other severable provisions and applications of this Compact shall remain in full force and effect.

SECTION 2.14 Subject to the availability of water in accordance with this Compact, nothing in this Compact shall be held or construed to alter, impair, or increase, validate, or prejudice any existing water right or right of water use that is legally recognized on the effective date of this Compact by either statutes or courts of the Signatory State within which it is located.

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### ARTICLE III

#### DEFINITIONS

##### SECTION 3.01 In this Compact:

- (a) The States of Arkansas, Louisiana, Oklahoma, and Texas are referred to as "Arkansas", "Louisiana", "Oklahoma", and "Texas", respectively, or individually as "State" or "Signatory State", collectively as "States" or "Signatory States."
- (b) The term "Red River" means the stream below the crossing of the Texas-Oklahoma state boundary at longitude 100 degrees west.
- (c) The term "Red River Basin" means all of the natural drainage area of the Red River and its tributaries east of the New Mexico-Texas state boundary and above its junction with Atchafalaya and Old Rivers.
- (d) The term "water of the Red River Basin" means the water originating in any part of the Red River Basin and flowing to or in the Red River or any of its tributaries.
- (e) The term "tributary" means any stream which contributes to the flow of the Red River.
- (f) The term "interstate tributary" means a tributary of the Red River, the drainage area of which includes portions of two (2) or more Signatory States.
- (g) The term "intrastate tributary" means a tributary of the Red River, the drainage area of which is entirely within a single Signatory State.
- (h) The term "Commission" means the agency created by Article IX of this Compact for the administration thereof.
- (i) The term "pollution" means the alteration of the physical, chemical, or biological characteristics of water by the acts or instrumentalities of man which create or are likely to result in a material and adverse effect upon human beings, domestic or wild animals, fish and other aquatic life, or adversely affect any other lawful use of such water; provided, that for the purposes of this Compact, "pollution" shall not mean or include "natural deterioration."
- (j) The term "natural deterioration" means the material reduction in the quality of water resulting from the leaching of solubles from the soils and rocks through or over which the water flows naturally.
- (k) The term "designated water" means water released from storage, paid for by non-Federal interests, for delivery to a specific point of use or diversion.

(l) The term "undesignated water" means all water released from storage other than "designated water."

(m) The term "conservation storage capacity" means that portion of the active capacity of reservoirs available for the storage of water for subsequent beneficial use, and it excludes any portion of the capacity of reservoirs allocated solely to flood control and sediment control, or either of them.

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~~(n) The term "runoff" means both the portion of precipitation which runs off the surface of a drainage area and that portion of the precipitation that enters the streams after passing through the portions of the earth.~~

ARTICLE IV

APPORTIONMENT OF WATER - REACH I

OKLAHOMA - TEXAS

Subdivision of Reach I and apportionment of water therein.

Reach I of the Red River is divided into topographical subbasins, with the water therein allocated as follows:

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SECTION 4.01 Subbasin 1- Interstate streams - Texas.

(a) This includes the Texas portion of Buck Creek, Sand (Lebos) Creek, Salt Fork Red River, Elm Creek, North Fork Red River, Sweetwater Creek, and Washita River, together with all their tributaries in Texas which lie west of the 100th Meridian.

(b) The annual flow within this subbasin is hereby apportioned sixty percent (60%) to Texas and forty percent (40%) to Oklahoma.

SECTION 4.02 Subbasin 2 - Intrastate and interstate streams - Oklahoma.

(a) This subbasin is composed of all tributaries of the Red River in Oklahoma and portions thereof upstream to the Texas-Oklahoma state boundary at longitude one hundred degrees west, beginning from Denison Dam and upstream to and including Buck Creek.

(b) The State of Oklahoma shall have free and unrestricted use of the water of this subbasin.

SECTION 4.03 Subbasin 3 - Intrastate streams - Texas.

(a) This includes the tributaries of the Red River in Texas, beginning from Denison Dam and upstream to and including Prairie Dog Town Fork Red River.

(b) The State of Texas shall have free and unrestricted use of the water in this subbasin.

SECTION 4.04 Subbasin 4 - Main stem of the Red River and Lake Texoma.

(a) This subbasin includes all of Lake Texoma and the Red River beginning at Denison Dam and continuing upstream to the Texas-Oklahoma state boundary at longitude one hundred degrees west.

(b) The storage of Lake Texoma and flow from the main stem of the Red River into Lake Texoma is apportioned as follows:

(1) Oklahoma 200,000 acre-feet and Texas 200,000 acre-feet, which quantities shall include existing allocations and uses; and

(2) Additional quantities in a ratio of fifty percent (50%) to Oklahoma and fifty percent (50%) to Texas.

SECTION 4.05 Special Provisions.

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(a) Texas and Oklahoma may construct, jointly or in cooperation with the United States, storage or other facilities for the conservation and use of water, provided that any facilities constructed on the Red River boundary between the two states shall not be inconsistent with the Federal legislation authorizing Denison Dam and Reservoir project.

(b) Texas shall not accept for filing, or grant a permit, for the construction of a dam to impound water solely for irrigation, flood control, soil conservation, mining and recovery of minerals, hydroelectric power, navigation, recreation and pleasure; or for any other purpose other than for domestic, municipal, and industrial water supply, on the main stem of the North Fork Red River or any of its tributaries within Texas above Lugert-Altus Reservoir until the date that imported water sufficient to meet the municipal and irrigation needs of Western Oklahoma is provided, or until January 1, 2000, whichever occurs first.

ARTICLE V

APPORTIONMENT OF WATER - REACH II

ARKANSAS, OKLAHOMA, TEXAS AND LOUISIANA

Subdivision of Reach II and allocation of water therein. Reach II of the Red River is divided into topographic subbasins, and the water therein is allocated as follows:

SECTION 5.01 Subbasin 1 - Intrastate streams - Oklahoma.

(a) This subbasin includes those streams and their tributaries above existing, authorized or proposed last downstream major damsites, wholly in Oklahoma and flowing into Red River below Denison Dam and above the Oklahoma-Arkansas state boundary. These streams and their tributaries with existing, authorized or proposed last downstream major damsites are as follows: Location Stream Site Ac-ft Latitude Longitude Island-Bayou Albany 85,200 33 51.5°N 96 11.4°W Blue River Durant 147,000 33 55.5°N 96 04.2°W Boggy River Boswell 1,243,800 34 01.6°N 95 45.0°W Kiamichi River Hugo 240,700 34 01.0°N 95 22.6°W

(b) Oklahoma is apportioned the water of this subbasin and shall have unrestricted use thereof.

SECTION 5.02 Subbasin 2 - Intrastate streams - Texas.

(a) This subbasin includes those streams and their tributaries above existing, authorized or proposed last downstream major damsites, wholly in Texas and flowing into Red River below Denison Dam and above the Texas-Arkansas state boundary. These streams and their tributaries with existing, authorized or proposed last downstream major damsites are as follows: Location Stream Site Ac-ft Latitude Longitude Shawnee Creek Randall Lake 5,400 33 48.1°N 96 34.8°W Brushy Creek Valley Lake 15,000 33 38.7°N 96 21.5°W New Bonham Bois d'Arc Creek Reservoir 130,600 33 42.9°N 95 58.2°W Coffee Mill Coffee Mill Creek Lake 8,000 33 44.1°N 95 58.0°W Sandy Creek Lake Crockett 3,900 33 44.5°N 95 55.5°W Sanders Creek Pat Mayse 124,500 33 51.2°N 95 32.9°W Pine Creek Lake Crook 11,011 33 43.7°N 95 34.0°W Big Pine Creek Big Pine Lake 138,600 33 52.0°N 95 11.7°W Pecan Bayou Pecan Bayou 625,000 33 41.1°N 94 58.7°W Mud Creek Liberty Hill 97,700 33 33.0°N 94 29.3°W KVW Ranch Mud Creek Lakes (3) 3,440 33 34.8°N 94 27.3°W

(b) Texas is apportioned the water of this subbasin and shall have unrestricted use thereof.

SECTION 5.03 Subbasin 3 - Interstate Streams - Oklahoma and Arkansas.

(a) This subbasin includes Little River and its tributaries above Millwood Dam.

(b) The States of Oklahoma and Arkansas shall have free and unrestricted use of the water of this subbasin within their respective states, subject, however, to the limitation that Oklahoma shall allow a quantity of water equal to forty percent (40%) of the total runoff originating below the following existing, authorized or proposed last downstream major damsites in Oklahoma to flow into Arkansas: Location Stream Site Ac-ft Latitude Longitude Little River Pine Creek 70,500 34 06.8°N 95 04.9°W Glover Creek Lukfata 258,600 34 08.5°N 94 55.4°W Mountain Fork River Broken-Bow 470,100 34 08.9°N 94 41.2°W

(c) Accounting will be on an annual basis unless otherwise deemed necessary by the States of Arkansas and Oklahoma.

#### SECTION 5.04 Subbasin 4 - Interstate streams - Texas and Arkansas.

(a) This subbasin shall consist of those streams and their tributaries above existing, authorized or proposed last downstream major damsites, originating in Texas and crossing the Texas-Arkansas state boundary before flowing into the Red River in Arkansas. These streams and their tributaries with existing, authorized or proposed last downstream major damsites are as follows: Location Stream Site Ac-ft Latitude Longitude McKinney Bayou Trib. Bringle Lake 3,052 33 30.6°N 94 06.2°W Barkman Barkman Creek Reservoir 15,900 33 29.7°N 94 10.3°W Sulphur River Texarkana 386,900 33 18.3°N 94 09.6°W

(b) The State of Texas shall have the free and unrestricted use of the water of this subbasin.

#### SECTION 5.05 Subbasin 5 - Main stem of the Red River and tributaries.

(a) This subbasin includes that portion of the Red River, together with its tributaries, from Denison Dam down to the Arkansas-Louisiana state boundary, excluding all tributaries included in the other four subbasins of Reach II.

(b) Water within this subbasin is allocated as follows:

(1) The Signatory States shall have equal rights to the use of runoff originating in subbasin 5 and undesignated water flowing into subbasin 5, so long as the flow of the Red River at the Arkansas-Louisiana state boundary is 3,000 cubic feet per second or more; provided no state is entitled to more than twenty-five percent (25%) of the water in excess of 3,000 cubic feet per second.

(2) Whenever the flow of the Red River at the Arkansas-Louisiana state boundary is less than 3,000 cubic feet per second, but more than 1,000 cubic feet per second, the States of Arkansas, Oklahoma, and Texas shall allow to flow into the

Red River for delivery to the State of Louisiana a quantity of water equal to forty percent (40%) of the total weekly runoff originating in subbasin 5 and forty percent (40%) of undesignated water flowing into subbasin 5; provided, however, that this requirement shall not be interpreted to require any state to release stored water.

(3) Whenever the flow of the Red River at the Arkansas-Louisiana state boundary falls below 1,000 cubic feet per second, the States of Arkansas, Oklahoma, and Texas shall allow a quantity of water equal to all the weekly runoff originating in subbasin 5 and all undesignated water flowing into subbasin 5 within their respective states to flow into the Red River as required to maintain a 1,000 cubic foot per second flow at the Arkansas-Louisiana state boundary.

(c) Whenever the flow at Index, Arkansas, is less than 526 cfs, the States of Oklahoma and Texas shall each allow a quantity of water equal to forty percent (40%) of the total weekly runoff originating in subbasin 5 within their respective states to flow into the Red River; provided however, this provision shall be invoked only at the request of Arkansas, only after Arkansas has ceased all diversions from the Red River itself in Arkansas above Index, and only if the provisions of subsections 5.05 (b) (2) and (3) have not caused a limitation of diversions in subbasin 5.

(d) No state guarantees to maintain a minimum low flow to a downstream state.

#### SECTION 5.06 Special Provisions.

(a) Reservoirs within the limits of Reach II, subbasin 5, with a conservation storage capacity of 1,000 acre-feet or less in existence or authorized on the date of the Compact pursuant to the rights and privileges granted by a Signatory State authorizing such reservoirs, shall be exempt from the provisions of Section 5.05; provided, if any right to store water in, or use water from, an existing exempt reservoir expires or is cancelled after the effective date of the Compact the exemption for such rights provided by this section shall be lost.

(b) A Signatory State may authorize a change in the purpose or place of use of water from a reservoir exempted by subparagraph (a) of this section without losing that exemption, if the quantity of authorized use and storage is not increased.

(c) Additionally, exemptions from the provisions of Section 5.05 shall not apply to direct diversions from Red River to off-channel reservoirs or lands.

ARTICLE VI

APPORTIONMENT OF WATER - REACH III

ARKANSAS, LOUISIANA, AND TEXAS

Subdivision of Reach III and allocation of water therein. Reach III of the Red River is divided into topographic subbasins, and the water therein allocated, as follows:

SECTION 6.01 Subbasin 1 - Interstate streams - Arkansas and Texas.

- (a) This subbasin includes the Texas portion of those streams crossing the Arkansas-Texas state boundary one or more times and flowing through Arkansas into Cypress Creek-Twelve Mile Bayou watershed in Louisiana.
- (b) Texas is apportioned sixty percent (60%) of the runoff of this subbasin and shall have unrestricted use thereof; Arkansas is entitled to forty percent (40%) of the runoff of this subbasin.

SECTION 6.02 Subbasin 2 - Interstate streams - Arkansas and Louisiana.

- (a) This subbasin includes the Arkansas portion of those streams flowing from subbasin 1 into Arkansas, as well as other streams in Arkansas which cross the Arkansas-Louisiana state boundary one or more times and flow into Cypress Creek-Twelve Mile Bayou watershed in Louisiana.
- (b) Arkansas is apportioned sixty percent (60%) of the runoff of this subbasin and shall have unrestricted use thereof; Louisiana is entitled to forty percent (40%) of the runoff of this subbasin.

SECTION 6.03 Subbasin 3 - Interstate streams - Texas and Louisiana.

- (a) This subbasin includes the Texas portion of all tributaries crossing the Texas-Louisiana state boundary one or more times and flowing into Caddo Lake, Cypress Creek-Twelve Mile Bayou or Cross Lake, as well as the Louisiana portion of such tributaries.
- (b) Texas and Louisiana within their respective boundaries shall each have the unrestricted use of the water of this subbasin subject to the following allocation:

- (1) Texas shall have the unrestricted right to all water above Marshall, Lake O' the Pines, and Black Cypress damsites; however, Texas shall not cause runoff to be depleted to a quantity less than that which would have occurred with the full operation of Franklin County, Titus County, Ellison Creek, Johnson Creek, Lake O' the Pines, Marshall, and Black

Cypress Reservoirs constructed, and those other impoundments and diversions existing on the effective date of this Compact. Any depletions of runoff in excess of the depletions described above shall be charged against Texas' apportionment of the water in Caddo Reservoir.

(2) Texas and Louisiana shall each have the unrestricted right to use fifty percent (50%) of the conservation storage capacity in the present Caddo Lake for the impoundment of water for state use, subject to the provision that supplies for existing uses of water from Caddo Lake, on date of Compact, are not reduced.

(3) Texas and Louisiana shall each have the unrestricted right to fifty percent (50%) of the conservation storage capacity of any future enlargement of Caddo Lake, provided, the two states may negotiate for the release of each state's share of the storage space on terms mutually agreed upon by the two states after the effective date of this Compact.

(4) Inflow to Caddo Lake from its drainage area downstream from Marshall, Lake O' the Pines, and Black Cypress damsites and downstream from other last downstream dams in existence on the date of the signing of the Compact document by the Compact Commissioners, will be allowed to continue flowing into Caddo Lake except that any man-made depletions to this inflow by Texas will be subtracted from the Texas share of the water in Caddo Lake.

(c) In regard to the water of interstate streams which do not contribute to the inflow to Cross Lake or Caddo Lake, Texas shall have the unrestricted right to divert and use this water on the basis of a division of runoff above the state boundary of sixty percent (60%) to Texas and forty percent (40%) to Louisiana.

(d) Texas and Louisiana will not construct improvements on the Cross Lake Watershed in either state that will affect the yield of Cross Lake; provided, however, this subsection shall be subject to the provisions of Section 2.08.

#### SECTION 6.04 Subbasin 4 - Intrastate streams - Louisiana.

(a) This subbasin includes that area of Louisiana in Reach III not included within any other subbasin.

(b) Louisiana shall have free and unrestricted use of the water of this subbasin.

## ARTICLE VII

### APPORTIONMENT OF WATER - REACH IV ARKANSAS AND LOUISIANA

Subdivision of Reach IV and allocation of water therein. Reach IV of the Red River is divided into topographic subbasins, and the water therein allocated as follows:

#### SECTION 7.01 Subbasin 1 - Intrastate streams - Arkansas.

(a) This subbasin includes those streams and their tributaries above last downstream major damsites originating in Arkansas and crossing the Arkansas-Louisiana state boundary before flowing into the Red River in Louisiana. Those major last downstream damsites are as follows: Location Stream Site Ac-ft Latitude Longitude Lake Ouachita River Catherine 19,000 34 26.6°N 93 01.6°W Caddo River DeGray Lake 1,377,000 34 13.2°N 93 06.6°W Little Missouri River Lake Greeson 600,000 34 08.9°N 93 42.9°W Alum Fork, Saline River Lake Winona 63,264 32 47.8°N 92 51.0°W

(b) Arkansas is apportioned the waters of this subbasin and shall have unrestricted use thereof.

#### SECTION 7.02 Subbasin 2 - Interstate Streams - Arkansas and Louisiana.

(a) This subbasin shall consist of Reach IV less subbasin 1 as defined in Section 7.01 (a) above.

(b) The State of Arkansas shall have free and unrestricted use of the water of this reach subject to the limitation that Arkansas shall allow a quantity of water equal to forty percent (40%) of the weekly runoff originating below or flowing from the last downstream major damsite to flow into Louisiana. Where there are no designated last downstream damsites, Arkansas shall allow a quantity of water equal to forty percent (40%) of the total weekly runoff originating above the state boundary to flow into Louisiana. Use of water in this subbasin is subject to low flow provisions of subparagraph 7.03 (b).

#### SECTION 7.03 Special Provisions.

(a) Arkansas may use the beds and banks of segments of Reach IV for the purpose of conveying its share of water to designated downstream diversions.

(b) The State of Arkansas does not guarantee to maintain a minimum low flow for Louisiana in Reach IV. However, on the following streams when the use of water in Arkansas reduces the flow at the Arkansas-Louisiana state boundary to the following amounts:

(1) Ouachita - 780 cfs

(2) Bayou Bartholomew - 80 cfs

(3) Boeuf River - 40 cfs

(4) Bayou Macon --40 cfs the State of Arkansas pledges to take affirmative steps to regulate the diversions of runoff originating or flowing into Reach IV in such a manner as to permit an equitable apportionment of the runoff as set out herein to flow into the State of Louisiana. In its control and regulation of the water of Reach IV any adjudication or order rendered by the State of Arkansas or any of its instrumentalities or agencies affecting the terms of this Compact shall not be effective against the State of Louisiana nor any of its citizens or inhabitants until approved by the Commission.

ARTICLE VIII

APPORTIONMENT OF WATER - REACH V

SECTION 8.01 Reach V of the Red River consists of the main stem Red River and all of its tributaries lying wholly within the State of Louisiana. The State of Louisiana shall have free and unrestricted use of the water of this subbasin.

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## ARTICLE IX

### ADMINISTRATION OF THE COMPACT

SECTION 9.01 There is hereby created an interstate administrative agency to be known as the "Red River Compact Commission", hereinafter called the "Commission". The Commission shall be composed of two representatives from each Signatory State who shall be designated or appointed in accordance with the laws of each state, and one Commissioner representing the United States, who shall be appointed by the President. The Federal Commissioner shall be the Chairman of the Commission but shall not have the right to vote. The failure of the President to appoint a Federal Commissioner will not prevent the operation or effect of this Compact, and the eight representatives from the Signatory States will elect a Chairman for the Commission.

SECTION 9.02 The Commission shall meet and organize within sixty (60) days after the effective date of this Compact. Thereafter, meetings shall be held at such times and places as the Commission shall decide.

SECTION 9.03 Each of the two Commissioners from each state shall have one vote; provided, however, that if only one representative from a state attends he is authorized to vote on behalf of the absent Commissioner from that state. Representatives from three states shall constitute a quorum. Any action concerned with administration of this Compact or any action requiring compliance with specific terms of this Compact shall require six concurring votes. If a proposed action of the Commission affects existing water rights in a state, and that action is not expressly provided for in this Compact, eight concurring votes shall be required.

SECTION 9.04 (a) The salaries and personal expenses of each state's representative shall be paid by the government that it represents, and the salaries and personal expenses of the Federal Commissioner will be paid for by the United States.

(b) The Commission's expenses for any additional stream flow gauging stations shall be equitably apportioned among the states involved in the reach in which the stream flow gauging stations are located.

(c) All other expenses incurred by the Commission shall be borne equally by the Signatory States and shall be paid by the Commission out of the "Red River Compact Commission Fund". Such fund shall be initiated and maintained by equal payments of each state into the fund. Disbursement shall be made from the fund in such manner as may be authorized by the Commission. Such fund shall not be subject to audit and accounting procedures of the state; however, all receipts and disbursements of the fund by the Commission shall be audited by a qualified independent public accountant at regular intervals, and the report of such audits shall be included in and become a part of the annual report of the Commission. Each state shall have the right to make its own audit of the accounts of the Commission at any reasonable time.



## ARTICLE X

### POWERS AND DUTIES OF THE COMMISSION

SECTION 10.01 The Commission shall have the power to:

(a) Adopt rules and regulations governing its operation and enforcement of the terms of the Compact;

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(b) Establish and maintain an office for the conduct of its affairs and, if desirable, from time to time, change its location;

(c) Employ or contract with such engineering, legal, clerical and other personnel as it may determine necessary for the exercise of its functions under this Compact without regard to the Civil Service Laws of any Signatory State; provided that such employees shall be paid by and be responsible to the Commission and shall not be considered employees of any Signatory State;

(d) Acquire, use and dispose of such real and personal property as it may consider necessary;

(e) Enter into contracts with appropriate state or Federal agencies for the collection, correlation and presentation of factual data, for the maintenance of records and for the preparation of reports;

(f) Secure from the head of any department or agency of the Federal or state government such information as it may need or deem to be useful for carrying out its functions and as may be available to or procurable by the department or agency to which the request is addressed; provided such information is not privileged and the department or agency is not precluded by law from releasing same.

(g) Make findings, recommendations or reports in connection with carrying out the purposes of this Compact, including, but not limited to, a finding that a Signatory State is or is not in violation of any of the provisions of this Compact. The Commission is authorized to make such investigations and studies, and to hold such hearings as it may deem necessary for said purposes. It is authorized to make and file official certified copies of any of its findings, recommendations or reports with such officers or agencies of any Signatory State, or the United States, as may have any interest in or jurisdiction over the subject matter. The making of findings, recommendations, or reports by the Commission shall not be a condition precedent to the instituting or maintaining of any action or proceeding of any kind by a Signatory State in any court or tribunal, or before any agency or officer, for the protection of any right under this Compact or for the enforcement of any of its provisions; and

(h) Print or otherwise reproduce and distribute its proceedings and reports.

SECTION 10.02 The Commission shall:

(a) Cause to be established, maintained, and operated such stream, reservoir and other gauging stations as are necessary for the proper administration of the Compact;

(b) Cause to be collected, analyzed and reported such information on stream flows, water quality, water storage and such other data as are necessary for the proper administration of the Compact;

(c) Perform all other functions required of it by the Compact and do all things necessary, proper and convenient in the performance of its duties thereunder;

(d) Prepare and submit to the Governor of each of the Signatory States a budget covering the anticipated expenses of the Commission for the following fiscal biennium;

(e) Prepare and submit an annual report to the Governor of each Signatory State and to the President of the United States covering the activities of the Commission for the preceding fiscal year, together with an accounting of all funds received and expended by it in the conduct of its work;

(f) Make available to the Governor or to any official agency of a Signatory State or to any authorized representative of the United States, upon request, any information within its possession;

(g) Not incur any obligation in excess of the unencumbered balance of its funds, nor pledge the credit of any of the Signatory States; and

(h) Make available to a Signatory State or the United States in any action arising under this Compact, without subpoena, the testimony of any officer or employee of the Commission having knowledge of any relevant facts.

## ARTICLE XI

### POLLUTION

SECTION 11.01 The Signatory States recognize that the increase in population and the growth of industrial, agricultural, mining and other activities combined with natural pollution sources may lead to a diminution of the quality of water in the Red River Basin which may render the water harmful or injurious to the health and welfare of the people and impair the usefulness or public enjoyment of the water for beneficial purposes, thereby resulting in adverse social, economic, and environmental impacts.

SECTION 11.02 Although affirming the primary duty and responsibility of each Signatory State to take appropriate action under its own laws to prevent, diminish, and regulate all pollution sources within its boundaries which adversely affect the water of the Red River Basin, the states recognize that the control and abatement of the naturally-occurring salinity sources as well as, under certain circumstances, the maintenance and enhancement of the quality of water in the Red River Basin may require the cooperative action of all states.

SECTION 11.03 The Signatory States agree to cooperate with agencies of the United States to devise and effectuate means of alleviating the natural deterioration of the water of the Red River Basin.

SECTION 11.04 The Commission shall have the power to cooperate with the United States, the Signatory States and other entities in programs for abating and controlling pollution and natural deterioration of the water of the Red River Basin, and to recommend reasonable water quality objectives to the states.

SECTION 11.05 Each Signatory State agrees to maintain current records of waste discharges into the Red River Basin and the type and quality of such discharges, which records shall be furnished to the Commission upon request.

SECTION 11.06 Upon receipt of a complaint from the Governor of a Signatory State that the interstate water of the Red River Basin in which it has an interest are being materially and adversely affected by pollution and that the state in which the pollution originates has failed after reasonable notice to take appropriate abatement measures, the Commission shall make such findings as are appropriate and thereafter provide such findings to the Governor of the state in which such pollution originates and request appropriate corrective action. The Commission, however, shall not take any action with respect to pollution which adversely affects only the state in which such pollution originates.

SECTION 11.07 In addition to its other powers set forth under this Article, the Commission shall have the authority, upon receipt of six concurring votes, to utilize applicable Federal statutes to institute legal action in its own name against the person or entity responsible for interstate pollution problems; provided, however, sixty (60) days before initiating legal action the Commission shall notify the Governor of the state in which the pollution source is located to allow that state an opportunity to initiate action in its own name.

SECTION 11.08 Without prejudice to any other remedy available to the Commission, or any Signatory State, any state which is materially and adversely affected by the pollution of the water of the Red River Basin by pollution originating in another Signatory State may institute a suit against any individual, corporation, partnership, or association, or against any Signatory State or political or governmental subdivision thereof, or against any officer, agency, department, bureau, district or instrumentality of or in any Signatory State contributing to such pollution in accordance with applicable Federal statutes. Nothing herein shall be construed as depriving any person of any rights of action relating to pollution which such person would have if this Compact had not been made.

ARTICLE XII

TERMINATION AND AMENDMENT OF COMPACT

SECTION 12.01 This Compact may be terminated at any time by appropriate action of the Legislatures of all of the four Signatory States. In the event of such termination, all rights established under it shall continue unimpaired.

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SECTION 12.02 This Compact may be amended at any time by appropriate action of the Legislatures of all Signatory States that are affected by such amendment. The consent of the United States Congress must be obtained before any such amendment is effective.



## ARTICLE XIII

### RATIFICATION AND EFFECTIVE DATE OF COMPACT

SECTION 13.01 Notice of ratification of this Compact by the Legislature of each Signatory State shall be given by the Governor thereof to the Governors of each of the other Signatory States and to the President of the United States. The President is hereby requested to give notice to the Governors of each of the Signatory States of the consent to this Compact by the Congress of the United States.

SECTION 13.02 This Compact shall become effective, binding and obligatory when, and only when:

- (a) It has been duly ratified by each of the Signatory States; and
- (b) It has been consented to by an Act of the Congress of the United States, which Act provides that: Any other statute of the United States to the contrary notwithstanding, in any case or controversy:
  - i. which involves the construction or application of this Compact;
  - ii. in which one or more of the Signatory States to this Compact is a plaintiff or plaintiffs; and
  - iii. which is within the judicial power of the United States as set forth in the Constitution of the United States; and without any requirement, limitation or regard as to the sum or value of the matter in controversy, or of the place of residence or citizenship of, or of the nature, character or legal status of, any of the other proper parties plaintiff or defendant in such case of controversy:

The consent of Congress is given to name and join the United States as a party defendant or otherwise in any such case or controversy in the Supreme Court of the United States if the United States is an indispensable party thereto.

SECTION 13.03 The United States District Courts shall have original jurisdiction (concurrent with that of the Supreme Court of the United States, and concurrent with that of any other Federal or state court, in matters in which the Supreme Court, or other court has original jurisdiction) of any case or controversy involving the application or construction of this Compact; that said jurisdiction shall include, but not be limited to, suits between Signatory States; and that the venue of such case or controversy may be brought in any judicial district in which the acts complained of (or any portion thereof) occur.



RULES FOR THE INTERNAL ORGANIZATION  
of the  
RED RIVER COMPACT COMMISSION

(As Amended April 25, 1984, April 30, 1991, May 4, 1993, and March 24, 1994)

ARTICLE I  
THE COMMISSION

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1.1 The Commission is the "Red River Compact Commission," which is referred to in Article X of the Red River Compact.

1.2 The credentials of each Commissioner shall be filed with both the Chairman and the Secretary of the Commission. When the credentials of a new Commissioner are received, the Secretary shall promptly notify each of the other Commissioners of the name and address of the new Commissioner.

1.3 Each Commissioner shall advise in writing the office of the Commission as to his address at which all official notices and other communications of the Commission shall be sent to him. Any change of address shall be promptly communicated in writing to the office of the Commission.

1.4 Persons designated to substitute for duly appointed Commissioners at meetings of the Compact Commission shall present the Commission with credentials of authority by letter, or other form of appointment acceptable to the Commission, which states the scope or limitations of the appointment, together with a copy of the state or federal law or Attorney General's opinion which authorizes the appointment.

ARTICLE II  
OFFICERS

2.1 The officers of the Commission shall be a Chairman, a Vice-Chairman, Secretary and a Treasurer.

2.2 The Commissioner representing the United States shall be the Chairman of the Commission. The Chairman or the designated representative of the Chairman, shall preside at meetings of the Commission. His duties shall be those usually imposed upon such officers and as may be assigned by these rules or by the Commission from time to time.

2.3 The Vice-Chairman shall be elected at the annual meeting from the Commissioners of the host state for the coming year as reflected by the minutes, and shall hold office for a term of one year, beginning on July 1 following the election, or until a successor is elected. The Vice-Chairman shall serve as Chairman in the event the President of the United States fails to appoint a Federal Commissioner, or in the absence of the Federal Commissioner or the designated representative of the Federal Commissioner.

2.4 The Secretary shall be selected at the annual meeting by the Commission from the state designated to host the next annual meeting as reflected in the minutes. The Secretary shall serve for the term of one year, beginning on July 1 following the selection, and perform the duties as the Commission shall direct. In case of a vacancy in the office of the Secretary, the Commission shall select a new Secretary as expeditiously as possible.

2.5 The Treasurer shall be selected by the Commission for a term of one year, beginning on July 1 following the selection. The Treasurer shall furnish a fidelity bond, the cost of which shall be paid by the Commission. The Treasurer shall receive, hold and disburse all funds which come into the his hands of the Treasurer.

2.6 The Secretary and Treasurer may be members of the Commission, and their offices may be combined by the Commission. Any one person may hold both offices.

2.7 Whenever there is a permanent change in the Commander of the Lower Mississippi Valley Division, Department of the Army Corps of Engineers, or its counterpart in any future reorganization of the Corps, the Vice-Chairman shall immediately request the President to appoint the new Commander as the U.S. Commissioner to the Compact Commission.

### ARTICLE III PRINCIPAL OFFICE

3.1 The principal office of the Commission shall be either the office of the Chairman or the Secretary, as the Commission shall direct.

3.2 Official books and records of the Commission shall be kept at the principal office.

### ARTICLE IV MEETINGS

4.1 The annual meeting of the Commission shall be held on the last Tuesday of April of each year.

4.2 Special meetings of the Commission may be called by the Chairman at any time. Upon the written request of each of the Commissioners of two states setting forth the matters to be considered at such meeting, the chairman shall call a special meeting.

4.3 Reasonable notice of all special meetings of the Commission shall be sent by the Chairman, to all members of the Commission by ordinary mail at least ten days in advance of each meeting and notice shall state the purpose thereof.

4.4 Emergency meetings of the Commission may be called by the Chairman at any time upon the concurrence of at least two states and such meetings may be conducted by long-distance telephone conference call or other electronic means. Any such long-distance telephone conference call or other electronic communication shall be recorded and made available for public inspection in accordance with the laws of the respective signatory states. Each of the signatory states shall be represented by at least one Commissioner during such an emergency conference and concur in the action.

An emergency is defined as a situation involving an eminent threat of injury to persons or damage to property or eminent financial loss when the time requirements for public notice and travel to a special meeting would make such procedure and travel impractical and increase the likelihood of injury or damage or eminent financial loss.

4.5 Notice to the public shall be given of all Commission meetings. Except as otherwise provided, the Chairman shall furnish notice of all meetings to the Commissioners of each signatory state, whose responsibility it shall be to give said notice to the public in accordance with the laws of their respective states.

In the event of an emergency meeting held by telephone or other electronic communication, no advance notice is required. All meetings of the Commission shall be held at the principal office, unless another place shall be agreed upon by the Commissioners.

4.6 Minutes of the Commission shall be preserved in suitable manner. Minutes, until approved, shall not be official and shall be furnished only to members of the Commission, its employees and committees.

4.7 Commissioners from three of the signatory states shall constitute a quorum. However, if an emergency meeting is conducted as provided for in rule 4.4, or if a proposed action of the Commission affects existing water rights in a state, and that action is not expressly provided for in the Compact, eight concurring votes shall be required. Any other actions concerned with the administration of the Compact or requiring compliance with specific terms of the Compact shall require six concurring votes.

4.8 At each regular or annual meeting of the Commission, the order of business, unless agreed otherwise, shall be as follows:

- Call to order;
- Approval of Agenda;
- Approval of the minutes;
- Report of Chairman;
- Report of Secretary;
- Report of the Treasurer;
- Report of the Commissioners;
- Report of Committees;
- Unfinished business;
- New business;
- Adjournment;

4.9 All meetings of the Commission, except executive sessions and except as otherwise provided, shall be open to the public. Executive sessions shall be open only to members of the Commission and such advisers as may be designated by each member and employees as permitted by the Commission; provided, however, that the Commission may call witnesses before it when in such sessions.

The Commission may hold executive sessions only for the purposes of discussing;

- (1) The employment, appointment, promotion, demotion, disciplining or resignation of a Commission employee or employees, members, advisers, or committee members.
- (2) Pending or contemplated litigation, settlement offers, and matters where the duty of the Commission's counsel to his client, pursuant to the Code of Professional Responsibility, clearly conflicts with the public's right to know.
- (3) The report, development, or course of action regarding security, personnel, plans, or devices.

No executive session may be held except on a vote, taken in public by a majority of a quorum of the members present. At least one Commissioner from each of the signatory states must agree to the holding of an executive session.

Any motion or other decision considered or arrived at in executive session shall be voidable unless, following the executive session, the Commission reconvenes in public session and presents and votes on such motion or other decision.

4.10 In the absence of a Chairman and Vice-Chairman, all of the Commissioners from any two (2) states may call an emergency or a special meeting of the Compact Commission.

#### ARTICLE V COMMITTEES

5.1 There may be the following standing committees:

- (a) Budget Committee;
- (b) Engineering Committee;
- (c) Environmental and Natural Resources Committee;
- (d) Legal Committee.

5.2 The committees shall have the following duties:

- (1) The Budget Committee shall prepare the annual budget and shall advise the Commission on all fiscal matters that may be referred to it.
- (2) The Engineering Committee shall advise the Commission all engineering matters that may be referred to it.
- (3) The Environmental and Natural Resources Committee shall advise the Commission on all environmental and natural resource matters that may be referred to it.
- (4) The Legal Committee shall advise the Commission on all legal matters that may be referred to it.

5.3 Commissioners may be members of committees. The number of members of each committee shall be determined from time to time by the Commission. The Commissioners of each state shall designate the member or members on each committee representing the State, and each State shall have one vote.

5.4 The Chairman may appoint a non-voting member of each committee.

5.5 The Chairman of each committee shall be designated by the Commission from members of the committee; however, in the event a Chairman is unable to perform his duties, the committee shall appoint an Interim Chairman.

5.6 The Commission may from time to time create special committees and assign it tasks. The Commission may also determine the composition of the special committees.

5.7 Formal committee reports shall be made in writing and filed with the Commission.

#### ARTICLE VI RULES AND REGULATIONS

6.1 So far as is consistent with the Compact, the Commission may adopt rules and regulations and amend them from time to time. Rules and regulations to be adopted shall be presented by resolution and approved by a quorum as set out in Rule 4.7. Copies of proposed resolutions for rule adoption shall be presented in writing to each of the Commissioners at least thirty days before the meeting upon which they are to be voted. However, at its meeting, by unanimous vote, the Commission may waive this notice requirement.

6.2 Rules and regulations of the Commission may be compiled and copies may be prepared for distribution to the public under such terms and conditions as the Commission may prescribe.

## ARTICLE VII FISCAL

7.1 All funds of the Commission shall be deposited in a depository or depositories designated by the Commission under the name of the "Red River Compact Commission Fund".

7.2 Disbursement of funds in the hands of the Treasurer, for items included in the approved budget, shall be made by check signed by him and the Vice-Chairman or by such person as may be designated by the Commission. Disbursement of funds for non-budgeted items shall be made by check signed by the Treasurer and Vice-Chairman upon voucher approved by at least six of the Commissioners, four of whom shall be from different signatory states.

7.3 At the annual meeting of each year, the Commission shall adopt a budget covering an estimate of its expenses for the following two fiscal years.

7.4 The payment of expenses of the Commission and of its employees shall not be subject to the audit and accounting procedures of the states.

7.5 All receipts and disbursements of the Commission shall be audited periodically as determined by the Commission by a qualified independent public accountant to be selected by the Commission and the report of the audit shall be included in and become a part of the annual report of the Commission.

7.6 The fiscal year of Commission shall begin July 1, of each year and end June 30 of the next succeeding year.

## ARTICLE VIII ANNUAL REPORT.

8.1 The Commission shall make an annual report and transmit it on or before the last day of May to the governors of the signatory states to the Red River Compact and to the President of the United States.

8.2 The annual report shall contain:

- (1) Minutes of all regular, special or emergency meetings held during the year;
- (2) All findings of facts made by the Commission during the preceding year;
- (3) Recommendations for actions by the signatory states;
- (4) Statements as to any cooperative studies made during the preceding year;
- (5) All data which the Commission deems pertinent;
- (6) The budget for current and future years;
- (7) The most recent audit report or current financial statement of the Red River Compact Fund;

- (8) Name, address and phone number of each Commissioner and each member of all standing committees;
  - (9) Such other pertinent matters as the Commission may require.
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**RED RIVER COMPACT INTERIM RULES AND REGULATIONS**  
**To Compute and Enforce Compact Compliance**  
**REACH II, SUBBASIN 5**

(Adopted 4/30/87)

1. These rules and regulations to be used to compute and enforce Compact compliance within Subbasin 5 of Reach II, Red River Compact, are adopted subject to the following conditions and assumptions:
  - a. It is fully understood that these rules and regulations should be modified as new or improved gaging stations are constructed, whenever experience or detailed studies demonstrate the need for modification, and if the Commission should modify its interpretation of Compact provisions relating to this Subbasin.
  - b. Definitions:
    - (1) "Diversion" as used in these rules and regulations, is the net loss to a water source from use by a diverter, and is computed as the diversion from the water source minus the part of the diversion which is returned to the water source. Normally, return flows must be measured to be considered; however, the EAC may consider and recommend exceptions. As used herein, "diversion" is equivalent to "net diversion" from a water source and to "depletion" or "consumptive use" of a water source.
2. **Management of Compact Compliance Computations.**
  - a. **Management Using State Centers:**
    - (1) State EAC representatives will establish State Computation Control Centers
      - (a) State representatives will gather data, exchange data and meet via conference call to check on computation results, if necessary.
      - (b) EAC will determine compliance with Compact.
  - b. **Management Period for Weekly Flow and Diversions:**
    - (1) Next week's State diversions will be allocated based on last week's compliance computations.
    - (2) It is each State's responsibility to limit its total State diversion allocation among its State diverters.
    - (3) The weekly period for use and flow data will start and end at 8:00 a.m. on Tuesday of each week.
    - (4) Data collection and dissemination will be completed on Tuesday of each week.
    - (5) Computation of Compliance will be completed on Wednesday of each week.
    - (6) Each State can request an update at any time.
  - c. **Management Improvement Studies:** The EAC will monitor the effect on accounting management of the following factors and will report thereon to the Commission whenever procedure changes appears desirable.
    - (1) Errors caused by travel time.
    - (2) Future restrictions computed from past week's data.
    - (3) Failure to consider channel loss.
    - (4) Failure to consider ungaged return flows.
    - (5) Failure to consider flow trends.

- (6) Addition of needed gages.
3. **Enforcement of Compact Compliance Requirements.** Each State will be responsible for insuring that the sum of the diversions by State users does not exceed the total State diversion authorized by the Red River Compact. In this regard, each State will be responsible for establishing clear legal authority within its State for enforcing the restrictions imposed by the Red River Compact.
4. **Data Reporting Procedures.**
- a. **Streamflow Gaging Station Records:** The EAC will make arrangements with the Corps of Engineers, the U.S. Geological Survey and with States as required to collect daily and/or weekly data, as needed, and forward to the State Computation and Control Centers.
- b. **Diversion Records:** Each State will be responsible to collect daily and/or weekly data, as needed, and forward to the State Computation and Control Centers.
- c. **Archived Records:** Records will be archived by Commission Chairman.
5. **General Compliance Requirements of Section 5.05, Red River Compact.**
- a. **Section 5.05 (b)(1):**
- (1) **Compact prescribes:** "The Signatory States shall have equal rights to the use of the runoff originating in subbasin 5 and undesignated water flowing into subbasin 5, so long as the flow of the Red River at the Arkansas-Louisiana state boundary is 3,000 cubic feet per second or more, provided no state is entitled to more than 25 percent of the water in excess of 3,000 cubic feet per second."
- (2) In computing the Subbasin 5 water allocation, when the flow of the Red River at the Arkansas-Louisiana State Boundary is 3,000 cfs or more and the total runoff and undesignated flow of Subbasin 5 is greater than or equal to 7,500 cfs but less than or equal to 12,000 cfs, Louisiana's allocation shall be 3,000 cfs and each of the three upstream states will equally share the runoff and undesignated flow in excess of 3,000 cfs.
- (3) When the total runoff and undesignated flow of Subbasin 5 is 12,000 cfs or more, each of the signatory states shall be entitled to 25% of the total runoff and undesignated flow.
- (4) State compliance with Section 5.05 (b)(1) does not need to be determined except when specifically requested by a Compact State.
- b. **Section 5.05 (b)(2):**
- (1) **The Compact states:** "Whenever the flow of the Red River at the Arkansas-Louisiana state boundary is less than 3,000 cubic feet per second, but more than 1,000 cubic feet per second, the States of Arkansas, Oklahoma, and Texas shall allow to flow into the Red River for delivery to the State of Louisiana a quantity of water equal to 40 percent of the total weekly runoff originating in subbasin 5 and 40 percent of undesignated water flowing into subbasin 5; provided, however, that this requirement shall not be interpreted to require any state to release stored water."
- (2) In computing the Subbasin 5 water allocation to Louisiana when flow of Red River at the Arkansas-Louisiana State boundary is less than 3,000 cfs but more than 1,000 cfs, the Subbasin 5 runoff for each of the three upstream States and the undesignated water flowing into Subbasin 5 from each upstream State totaled, and the three upstream States should allow to pass to Louisiana 40 percent of the total or 1,000 cfs, whichever is greater.

- (3) When the Subbasin 5 runoff plus undesignated water totals at least 2,500 cfs and not more than 7,500 cfs, each of the three upstream States are allocated 60 percent of its runoff plus undesignated inflow and the other 40 percent is to be allowed to flow into the Red River for delivery to Louisiana.
- (4) When the Subbasin 5 runoff plus undesignated water totals at least 1,000 cfs but less than 2,500 cfs, the allocation to Louisiana is 1,000 cfs because of Compact Section 5.05 (b)(3). The total Subbasin 5 runoff plus undesignated water is compared to the Louisiana allocation of 1,000 cfs and a percentage is established. Each of the three upstream States will be entitled to divert and use a quantity computed using (100 percent minus the established percentage) times (the total of runoff from its Subbasin 5 areas plus undesignated water flowing into its Subbasin 5 areas).
- (5) This Compact compliance determination should be made whenever the flow of the Red River at the Arkansas-Louisiana State boundary falls below 3,000 cfs and is more than 1,000 cfs.

c. Section 5.05 (b)(3):

- (1) The Compact states: "Whenever the flow of the Red River at the Arkansas-Louisiana state boundary falls below 1,000 cubic feet per second, the States of Arkansas, Oklahoma, and Texas shall allow a quantity of water equal to all the weekly runoff originating in Subbasin 5 and all undesignated water flowing into Subbasin 5 within their respective states to flow into the Red River as required to maintain a 1,000 cubic foot per second flow at the Arkansas-Louisiana state boundary."
- (2) In computing the Subbasin 5 allocation when the flow of the Red River at the Arkansas-Louisiana State boundary falls below 1,000 cfs, and when the Subbasin 5 runoff and undesignated water flowing into Subbasin 5 total 1,000 cfs or less, all flow must be passed to Louisiana.
- (3) When the Subbasin 5 runoff and undesignated water flowing into Subbasin 5 total more than 1,000 cfs but less than 2,500 cfs, Louisiana is allocated 1,000 cfs. This 1,000 cfs Louisiana entitlement is compared to the total runoff plus undesignated water and a percentage is established. Each of the three upstream States will be entitled to divert and use a quantity computed using (100 percent minus the established percentage) times (its total State runoff and undesignated water inflow).
- (4) See rules for Compact Section 5.05 (b)(2) when the Subbasin 5 runoff and undesignated water flowing into Subbasin 5 total 2,500 cfs or more up to 7,500 cfs.
- (5) This Compact compliance determination should be made whenever the flow of the Red River at the Arkansas-Louisiana State boundary falls below 1,000 cfs.

d. Section 5.05 (c):

- (1) The Compact states: "Whenever the flow at Index, Arkansas, is less than 526 c.f.s., the states of Oklahoma and Texas shall each allow a quantity of water equal to 40 percent of the total weekly runoff originating in Subbasin 5 within their respective states to flow into the Red River; provided however, this provision shall be invoked only at

the request of Arkansas, only after Arkansas has ceased all diversions from the Red River itself in Arkansas above Index, and only if the provisions of Sub-sections 5.05 (b)(2) and (3) have not caused a limitation of diversions in subbasin 5."

- (2) In computing the Subbasin 5 allocation when flow of Red River at Index Arkansas is less than 256 cfs, the States of Oklahoma and Texas are to pass 40 percent of weekly runoff from respective Subbasin 5 areas.
- (3) This Compact compliance determination will be made only when requested by Arkansas, only after Arkansas has ceased all diversions from the Red River, and only if the provisions of subsections 5.05 (b)(2) and (3) have not caused a limitation of diversions in Subbasin 5.

6. **Procedures (Disregarding Designated Flows) to Compute State Runoff, Runoff plus Undesignated Inflows, and Flow of Red River at Arkansas-Louisiana State Boundary.**

a. **Oklahoma.**

(1) **Runoff plus Undesignated Inflows of Denison Dam to DeKalb Gage:**

- (a) Kiamichi River near Hugo, OK, Gage flow, plus Muddy Boggy Creek near Unger, OK, Gage flow plus Blue River near Blue, OK Gage flow, plus
- (b) Fifty percent of (DeKalb Gage flow, plus Texas and Oklahoma diversions, minus gaged flows at Kiamichi River near Hugo, Ok, Muddy Boggy Creek near Unger, OK, Blue River near Blue, OK, and Sanders Creek near Chicota, Texas, streamflow Gages).

(2) **Runoff plus Undesignated Inflows, DeKalb Gage to Oklahoma-Arkansas State line:** Fifteen and one-half (15.5) percent of (Index Gage flow, minus DeKalb Gage flow, plus Oklahoma, Texas and Arkansas diversions downstream from DeKalb Gage).

(3) **Runoff only, Denison Dam to Oklahoma-Arkansas State line.**

- (a) Fifty percent of (DeKalb Gage flow, minus Red River at Denison Dam Gage flow, plus Texas and Oklahoma diversions upstream from DeKalb Gage, minus Blue River near Blue, OK, Gage flow, minus Muddy Boggy Creek near Unger-Okla. Gage flow, minus Kiamichi River near Hugo-Okla. Gage flow minus Gage flow), plus
- (b) Fifteen and one-half (15.5) percent of (Index Gage flow, minus DeKalb Gage flow, plus Oklahoma, Texas and Arkansas diversions between DeKalb and Index Gages).

b. **Texas.**

(1) **Runoff plus Undesignated Inflows, DeKalb Gage to Index Gage:**

- (a) Sanders Creek near Chicota Gage flow, plus
- (b) Fifty percent of: (DeKalb Gage flow, plus Texas and Oklahoma diversions, minus gaged flows at Kiamichi River near Hugo, OK, Muddy Boggy Creek near Unger, OK, Blue River near Blue, OK, and Sanders Creek near Chicota, TX, streamflow Gages).

(2) **Runoff plus Undesignated Inflows, DeKalb Gage to Index Gage:** Fifty (50) percent of (Index Gage flow, minus DeKalb Gage flow, plus Oklahoma, Texas and Arkansas diversions downstream from DeKalb Gage).

(3) **Runoff plus Undesignated Inflows, Sulphur River Gage:** One hundred percent of (Sulphur River near Texarkana Gage flow) minus (Texas diversions from river below gage) plus (Texas diversions below Texarkana Dam).

(4) **Runoff Only, Denison Dam to Index Gage:** Fifty percent of (Index Gage flow, minus Red River at Denison Dam Gage flow, plus Oklahoma and Texas and Arkansas diversions upstream from the Index Gage, minus Blue River near Blue, OK, Gage flow, minus Muddy Boggy Creek near Unger-Okla. Gage flow, minus Kiamichi River near Hugo-Okla. flow, minus Sanders Creek near Chicota-Texas Gage flow).

**c. Arkansas Runoff plus Undesignated Inflows.**

(1) **Oklahoma-Arkansas State Line to Index Gage:** Thirty-four and one-half (34.5) percent of (Index Gage flow, minus DeKalb Gage flow, plus Oklahoma and Texas and Arkansas diversions between DeKalb and Index Gages).

(2) **Index Gage to Hosston Gage:**

(a) Hosston Gage flow, plus Louisiana diversions above Hosston Gage, minus Index Gage flow, minus (Sulphur River near Texarkana Gage flow less Texas diversions from river below gage), plus Arkansas diversions downstream from Index Gage.

**d. Louisiana Streamflow at Arkansas-Louisiana State Boundary.**

(1) Red River flow at Arkansas-Louisiana State boundary equals (Gage flow) plus (Louisiana diversions from Red River downstream from the State boundary and upstream from gage).

(2) **Data needed to make interim Louisiana calculations**

(a) For Red River flows up to 5,000 cfs - Hosston Gage flow, plus Louisiana diversions from Red River upstream from Hosston Gage.

(b) For Red River flows of 5,000 cfs or larger - Shreveport Gage flow, plus Louisiana diversions from Red River upstream from Shreveport Gage, minus Twelvemile Bayou near Dixie-La Gage flow, plus Louisiana diversions from Twelvemile Bayou below Twelvemile Bayou near Dixie-La Gage.

(3) **Effect of Flow Trends, Scheduled Change of Reservoir Releases, and Other Events Certain to Significantly Change Flow at Arkansas-Louisiana State Boundary During Coming Week.**

In addition to the Arkansas-Louisiana State boundary flow estimated based on subparagraph (2) (a) or (b) above, the EAC will also advise the Commission of probable significant changes in State boundary flow which should result from flow trends, scheduled change of reservoir releases, and other such known events.

7. **Procedures (Using Designated Flow Data) to Compute State Runoff plus Undesignated Inflows and Flow of Red River at Arkansas-Louisiana State boundary.** Procedures outlined in paragraph 6 above will be followed except that designated inflows, designated outflows and diversion of designated flows will be accounted for whenever appropriate.



**RED RIVER COMPACT RULES AND REGULATIONS**  
**To Compute and Enforce Compact Compliance**  
**REACH I, SUBBASIN 1**

(Adopted 4/30/87)

1. **General.** These rules and regulations to be used to compute and enforce Compact compliance within Subbasin I of Reach I, Red River Compact, are adopted subject to the following conditions and assumptions.
  - a. It is fully understood that these rules and regulations should be modified as new or improved gaging stations are constructed, whenever experience or detailed studies demonstrate the need for modification, and if the Commission should modify its interpretation of Compact provisions relating to this Subbasin.
2. **Management of Compact Compliance Computations.**
  - a. **Management Using State Centers:**
    - (1) Texas and Oklahoma representatives will establish State Computation and Control Centers.
      - (a) State representatives will gather data, exchange data and meet prior to the annual Commission meeting to check on computation results.
      - (b) The EAC will determine compliance with Compact.
  - b. **Management Period for Compact Compliance Computations:**
    - (1) Computation will be on the calendar year basis.
    - (2) Water data for a calendar year should be exchanged prior to March 15 of the following year.
    - (3) Compact Compliance Computation for a calendar year should be completed by April 15 of the following year.
3. **Enforcement of Compact Compliance Requirements.** Texas will be responsible for insuring that the sum of Texas uses does not exceed the total Texas water use authorized by the Red River Compact, and Texas will be responsible for establishing clear legal authority within Texas for enforcing the restrictions imposed by the Red River Compact.
4. **Data Reporting Procedures.**
  - a. **Streamflow Gaging Station Records:** The EAC will make arrangements with federal and State agencies, as required, to collect calendar year data as needed, and forward to the Texas and Oklahoma Computation Control Centers.
  - b. **Archived Records:** Records will be archived by the Commission Chairman.
5. **General Compliance Requirements of Section 4.01 Red River Compact.**
  - a. **SECTION 4.01. Subbasin 1 - Interstate Streams - Texas:**
    - (1) **The Compact prescribes:**
      - "(a) This includes the Texas portion of Buck Creek, Sand (Lebos) Creek, Salt Fork Red River, Elm Creek, North Fork Red River, Sweetwater Creek and Washita River, together with all their tributaries in Texas which lie west of the 100th Meridian."
      - "(b) The annual flow within this subbasin is hereby apportioned sixty (60) percent to Texas and forty (40) percent to Oklahoma."

SECTION 4.01 is modified in part by SECTION 4.05. Special Provisions, as follows:

"(b) Texas shall not accept for filing, or grant a permit, for the construction of a dam to impound water solely for irrigation, flood control, soil conservation, mining and recovery of minerals, hydroelectric power, navigation, recreation and pleasure, or for any other purpose other than for domestic, municipal, and industrial water supply, on the mainstem of the North Fork Red River or any of its tributaries within Texas about Lugert-Altus Reservoir until the date that imported water, sufficient to meet the municipal and irrigation needs of Western Oklahoma is provided, or until January 1, 2000, which ever occurs first."

- (2) Pertinent extracts from the Supplemental Interpretive Comments of Legal Advisory Committee, as approved by the Red River Compact Commission on the 19th day of September 1978, are as follows:

Pages 9 and 10 " \* \* \* \* \* The flow of interstate tributaries is generally divided 60 percent to the upstream State and 40 percent to the downstream State. Because flows in Reach I are primarily from flood flows, an annual basis of accounting was adopted"

\* \* \* \* \*

"Section 4.05(b) reflects the compromise of a long-standing dispute between Oklahoma and Texas over the water of the North Fork of the Red River and Sweetwater Creek. \* \* \* \* \*"

"Under the Compromise Texas will limit development on North Fork and Sweetwater Creek to projects justified on the basis of municipal, industrial, and domestic needs until the year 2000. However, if sufficient imported water becomes available in Western Oklahoma before 2000, Texas will be free to pursue full development of its 60% of these interstate tributaries. \* \* \* \* \*"

- (2) Until January 1, 2000 (assuming that imported water is not provided prior to that date in sufficient amounts to meet municipal and irrigation needs of Western Oklahoma) special restrictions apply to Texas water use in its North Fork Red River watershed upstream from the Lugert-Altus Reservoir. Therefore, some of the Compact compliance rules for the North Fork Red River watershed upstream from the Lugert-Altus Reservoir (para 5.f.(3) & (4) and g.(3) & (4) below) expire on January 1, 2000, if still in effect at that time.

- b. Buck Creek Watershed in Texas: Buck Creek watershed covers about 300 square miles in Texas. There are no existing gaging stations on Buck Creek in Texas or in Oklahoma. Since neither the Texas nor Oklahoma use of flow from Buck Creek is significant at this time, it is not required to make an annual accounting of the flow in Buck Creek. It also appears that establishing gaging stations and channel loss values so that future annual accountings could be made is not economically justified at this time. Annual accounting procedures for this watershed should be developed to provide a 60:40 apportionment whenever requested by either Oklahoma or Texas.

c. **Sand (Lebos) Creek Watershed in Texas:** Sand Creek watershed covers about 65 square miles in Texas. There are no gaging stations on Sand Creek in Texas or in Oklahoma. Since neither Texas nor Oklahoma makes significant use of flow from Sand Creek, it is not necessary to make an annual accounting of the flow in Sand Creek, and it does not seem to be economically justified at this time to establish gaging stations and determine channel loss values so that future annual accountings could be made. Annual accounting procedures for this watershed should be developed to provide a 60:40 apportionment whenever requested by either Oklahoma or Texas.

d. **Salt Fork Red River Watershed in Texas:** Salt Fork Red River watershed in Texas covers about 1,380 square miles, of which 209 are non-contributing.

The USGS streamflow gage number 07300000, Salt Fork Red River near Wellington, Texas, is about 16 miles upstream from the Oklahoma-Texas State line and measures flow from a 1,222 sq. mi. drainage area, of which 209 is probably non-contributing. The average annual discharge (1953-1966) was 52,600 AF/yr, and the average annual discharge since Greenbelt Reservoir was completed (1967-1977) has been 33,250 AF/yr.

The USGS streamflow gage 07300500, Salt Fork Red River at Mangum, Oklahoma, is about 29 miles downstream from the Oklahoma-Texas State line and measures flow from a 1,566 sq. mile drainage area, of which 209 is probably non-contributing. The average annual discharge (1937-1977) has been 62,450 AF/yr.

(1) The actual annual delivery at the Oklahoma State line is computed as follows:

- (a) The annual flow at the Wellington gage,
- (b) Minus channel losses to Wellington gage flows between gage and State line (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment),
- (c) Plus Texas' flow between Wellington gage and the State line. (This flow will be computed based on intervening drainage area between Wellington and Mangum gages adjusted for both Texas and Oklahoma man-made depletions.), and
- (d) Minus Texas' man-made depletions downstream from the Wellington gage.

(2) The scheduled annual delivery at the Oklahoma State line is 40 percent of the natural flow at State line without diversions or impoundments, and would be computed as 40 percent of the following:

- (a) The actual annual delivery (para 5.d.(1) above),
- (b) Plus all man-made depletions in Texas, and
- (c) Minus the increased channel losses in Texas which would have incurred had Texas depletions not occurred (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment).

(3) Compact compliance is achieved as long as actual delivery exceeds scheduled delivery.

e. **Elm Creek Watershed in Texas:** Elm Creek watershed covers about 360 square miles in Texas which includes the North Elm Creek tributary. There is no streamflow gage on Elm Creek in Texas. The USGS gage number 07303400, Elm Fork of North Fork Red River near Carl, Oklahoma, is about 6

miles downstream from the Oklahoma-Texas State line, and was used to measure flow from a 416 square mile drainage area but discharge measurements at this site were discontinued in 1980. The average annual discharge (20 years) was 30,280 AF/yr. No Compact compliance accounts can be made until the Gage near Carl has been reestablished.

- (1) The actual annual delivery at State line is computed as follows:
  - (a) Flow at the State line. (This flow will be computed based on the drainage area and on the flow measured at Carl gage, adjusted for both Texas and Oklahoma depletions.), and
  - (b) Minus Texas' man-made depletions.
- (2) The scheduled annual delivery at State line is 40 percent of the natural flow at State line without diversions or impoundments and would be computed as 40 percent of the following:
  - (a) The actual annual delivery (para 5.e.(1) above),
  - (b) Plus man-made depletions in Texas, and
  - (c) Minus the increased channel losses in Texas which would have been incurred if Texas had not depleted the flow (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment).
- (3) Compact compliance is achieved as long as the actual delivery exceeds the scheduled delivery.

**I. Washita River Watershed in Texas:** There is no streamflow gage on the Washita River in Texas. The USGS streamflow gage number 07316500, Washita River near Cheyenne, Oklahoma, is over 21 miles downstream from the Oklahoma-Texas State line, and measures flow from a 794 square mile drainage area, of which about 441 square miles are in Texas. The average annual discharge at the Cheyenne gage (44 years) has been 20,720 AF/yr.

- (1) The actual annual delivery at Oklahoma State line is computed as follows:
  - (a) The annual flow at the Cheyenne gage,
  - (b) Plus channel losses to the State line flow between the State line and the gage (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment),
  - (c) Minus Oklahoma's flow between the State line and Cheyenne gage. (This flow will be computed based on the drainage area upstream from the Cheyenne gage, adjusted for both Texas and Oklahoma man-made depletions.), and
  - (d) Minus Texas' man-made depletions.
- (2) The annual scheduled delivery at State line is 40 percent of the natural flow at State line without diversions or impoundments, and would be computed as 40 percent of the following:
  - (a) The actual annual delivery at State line (para 5.h.(1) above),
  - (b) Plus man-made depletions in Texas, and
  - (c) Minus the increased channel losses which would have occurred if Texas had not made any diversions (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment).
- (3) Compact compliance is achieved as long as the actual delivery exceeds the scheduled delivery.

**RESOLUTION TO ADOPT  
RULES AND REGULATIONS  
TO COMPUTE AND ENFORCE COMPACT COMPLIANCE  
REACH I, SUBBASIN 1-SWEETWATER CREEK AND NORTH FORK RED RIVER**

**THE COMMISSION FINDS:**

1. that no projects or diversions have occurred in Texas from Sweetwater Creek or the North Fork Red River above Lugert-Altus Reservoir as of this date which violate Article IV, §§ 4.01(b), 4.05(b) of the Red River Compact;
2. that in compliance with the Compact Texas is entitled to 60% of the state line natural flow on an annual basis of Sweetwater Creek and Oklahoma is entitled to 40% of the state line natural flow on an annual basis of Sweetwater Creek; and
3. that in compliance with the Compact Texas is entitled to 60% of the state line natural flow on an annual basis of the North Fork of the Red River and Oklahoma is entitled to 40% of the state line natural flow on an annual basis of the North Fork of the Red River.

**THE COMMISSION HEREBY ADOPTS** the rules set forth below to compute and apportion the waters of Sweetwater Creek and the North Fork of the Red River between Texas and Oklahoma in accordance with Article IV, §4.01(b) of the Red River Compact.

**RED RIVER COMPACT RULES AND REGULATIONS  
To Compute and Enforce Compact Compliance  
REACH I – SUBBASIN 1-SWEETWATER CREEK AND NORTH FORK RED RIVER**

**1. General.**

These rules and regulations to be used to compute and enforce Compact compliance for Sweetwater Creek and North Fork Red River in Reach I, Subbasin 1 of the Compact are adopted subject to the following conditions and assumptions:

- A. It is fully understood that these rules and regulations should be modified as new or improved gaging stations are constructed, whenever experience or detailed studies demonstrate the need for modification, or if the Commission should modify its interpretation of the Compact provisions relating to this Subbasin.
- B. Texas is apportioned 60% of the annual flow of Sweetwater Creek and Oklahoma is apportioned 40% of the annual flow of Sweetwater Creek. Texas is apportioned 60% of the annual flow of the North Fork of the Red River and Oklahoma is apportioned 40% of the annual flow of the North Fork of the Red River.

**2. Management of Compact Compliance Computations.**

**A. Management Using State Centers:**

(1) Texas and Oklahoma representatives will establish State Computation and Control Centers.

(a) State representatives will gather data, exchange data, and meet prior to the annual Commission meeting to discuss computation results.

(b) The Engineer Advisory Committee will report to the Commission on compliance with the Compact.

**B. Management Period for Compact Compliance Computations**

(1) Computation will be on the calendar year basis.

(2) Water data for a calendar year should be exchanged prior to March 15 of the following year.

(3) Compact Compliance Computation for a calendar year should be completed by April 15 of the following year.

**3. Enforcement of Compact Compliance Requirements.**

A. Texas will be responsible for insuring that the sum of Texas uses does not exceed the total Texas water use authorized by the Red River Compact, and Texas will be responsible for establishing legal authority within Texas for enforcing the restrictions imposed by the Red River Compact.

B. Oklahoma will be responsible for insuring that the sum of Oklahoma uses does not exceed the total Oklahoma water use authorized by the Red River Compact, and Oklahoma will be responsible for establishing legal authority within Oklahoma for enforcing the restrictions imposed by the Red River Compact.

C. **Annual Accounting:** Pursuant to Section 2.11 of the Compact, accounting for apportionment purposes is not mandatory until Texas or Oklahoma deem the accounting necessary.

4 **Data Reporting Procedures.**

- A. **Streamflow Gauging Station Records:** The Engineer Advisory Committee will make arrangements with federal and state agencies, as required, to collect calendar year data as needed, and forward to the Texas and Oklahoma Computation Control Centers.
- B. **Archived Records:** Records will be archived by the Commission Chairman.

5. **Compact Provisions**

- A. Sec. 4.01, Subbasin 1--Interstate streams--Texas, prescribes:
- (a) This includes the Texas portion of Buck Creek, Sand (Lebos) Creek, Salt Fork Red River, Elm Creek, North Fork Red River, Sweetwater Creek, and Washita River, together with all their tributaries in Texas which lie west of the 100th Meridian.
- (b) The annual flow within this subbasin is hereby apportioned sixty (60) percent to Texas and forty (40) percent to Oklahoma.
- B. Section 4.01 is modified in part by Section 4.05, Special Provisions, as follows:
- (b) Texas shall not accept for filing, or grant a permit, for the construction of a dam to impound water solely for irrigation, flood control, soil conservation, mining and recovery of minerals, hydroelectric power, navigation, recreation and pleasure, or for any other purpose other than for domestic, municipal, and industrial water supply, on the mainstem of the North Fork Red River or any of its tributaries within Texas above Lugert-Altus Reservoir until the date that imported water sufficient to meet the municipal and irrigation needs of Western Oklahoma is provided, or until January 1, 2000, whichever occurs first.

6. **Compact Compliance North Fork Red River Watershed**

- A. **Gauges -** USGS streamflow gauge on the North Fork of the Red River near Shamrock, Texas (07301300) is approximately 16 miles from the Oklahoma-Texas State Line and measures flow from a 1,082 square mile drainage area of which 379 square miles are probably non-contributing. USGS streamflow gauge near Carter, Oklahoma (07301500) is approximately 30 miles downstream from the Oklahoma-Texas State Line and measures flow from a 2337 square mile drainage area of which 399 square miles are probably non-contributing. The drainage area of the North

Fork Red River at the Oklahoma-Texas State line is computed as 1229 square miles of which 379 square miles are probably non-contributing.

**B. Actual Delivery** - The actual annual delivery at the Oklahoma Texas State line shall be computed using the USGS streamflow gauge North Fork Red River near Shamrock (07301300) and the USGS streamflow gauge North Fork Red River near Carter, Oklahoma (07301500) as follows:

- (1) The annual flow at the Shamrock gauge,
- (2) Minus channel losses to Shamrock gauge flows between the gauge and State line (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment),
- (3) Plus Texas' flow between Shamrock gauge and the State line. (This flow will be computed by subtracting the flow of the Shamrock gauge from the flow at the Carter gauge. Then based on the intervening drainage area between the Shamrock and Carter Gauges, adjusted for both Texas and Oklahoma man-made depletions determine the runoff per square mile of contributing drainage which will be applied to the contributing drainage area in Texas below the Shamrock gage.), and
- (4) Minus Texas' man-made depletions downstream from the Shamrock gage.

**C. Scheduled Delivery** - The scheduled annual delivery at the Oklahoma Texas State line is 40 percent of the natural flow at State line without diversions or impoundments, and shall be computed as 40 percent of the following:

- (1) The actual annual delivery at Oklahoma State line (above),
- (2) Plus man-made depletion in Texas, and
- (3) Minus the increased channel losses in Texas which would have occurred if Texas had not depleted the flows (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment).

**D. Compact Compliance** - Compact compliance is achieved as long as the actual delivery exceeds the scheduled delivery.

7. **Compact Compliance Sweetwater Creek Watershed in Texas**

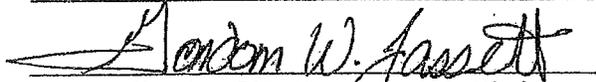
- A. **Gauges** - USGS streamflow gauge on Sweetwater Creek near Kelton, Texas (07301410), is about 8 miles upstream from the Oklahoma Texas State line and measures flow from a 287 square mile drainage area, of which 20 square miles is probably non-contributing. USGS streamflow gage on Sweetwater Creek near Sweetwater, Oklahoma (07301420) is located near the Oklahoma Texas State line and measures flow from a 424 square mile drainage area, of which 20 square miles is probably non-contributing. The drainage area of Sweetwater Creek at the Oklahoma Texas state line is computed as 371 square miles with 20 square miles being non-contributing. The actual annual delivery at Oklahoma Texas state line shall be computed using the USGS streamflow gauge on Sweetwater Creek near Kelton (07301410) and the USGS streamflow gauge on Sweetwater Creek near Sweetwater, Oklahoma (07301420) as follows:
- B. **Actual Delivery** - The actual annual delivery at the Oklahoma Texas State line shall be computed as follows:
- (1) The annual flow at the Kelton gauge,
  - (2) Minus channel losses to Kelton gauge flows between gauge and State line (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment),
  - (3) Plus Texas' flows between the Kelton gage and the State line. (This flow will be computed by subtracting the flow of the Kelton gauge from the flow at the Sweetwater gauge. Then based on Texas' drainage areas between the Kelton gauge and the Sweetwater gauge, adjusted for both Texas and Oklahoma man-made depletions determine the runoff per square mile of contributing drainage which will be applied to the contributing drainage area in Texas below the Kelton gauge.), and
  - (4) Minus Texas' man-made depletions between the Kelton gauge and the state line.
- C. **Scheduled Delivery** - The scheduled annual delivery at the Oklahoma Texas State line is 40 percent of the natural flow at State line without diversions or impoundments, and shall be computed as 40 percent of the following:
- (1) The actual annual delivery at State line (above),
  - (2) Plus man-made depletions in Texas, and

- (3) Minus the increased channel losses in Texas which have occurred if Texas had not depleted the flows (until this specific channel loss value is available, the Compact compliance calculations will be made ignoring this channel loss adjustment).

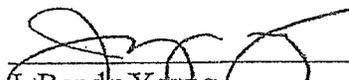
D. **Compact Compliance** - Compact compliance is achieved as long as the actual delivery exceeds the scheduled delivery.

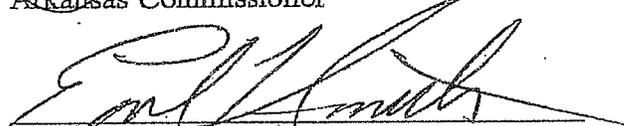
Adopted by unanimous consent of the Commission April 22, 2008 at Marshall, Texas.

RED RIVER COMPACT COMMISSION

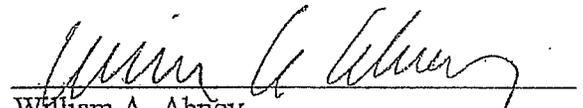
  
Gordon W. "Jeff" Fasset, Chairman

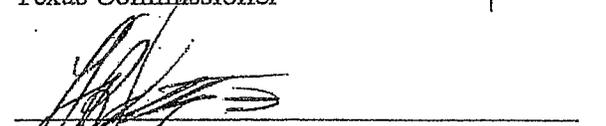
STATE OF ARKANSAS

  
J. Randy Young  
Arkansas Commissioner

  
Earl Smith, Acting Arkansas Commissioner

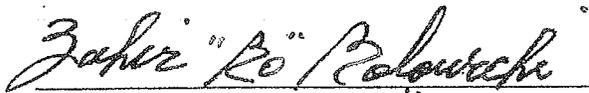
STATE OF TEXAS

  
William A. Abney  
Texas Commissioner

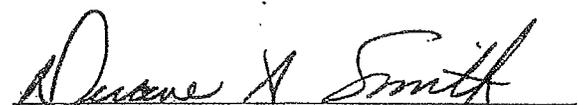
  
Herman R. Settemeyer, Acting Commissioner

STATE OF LOUISIANA

  
Arthur R. Theis  
Louisiana Commissioner

  
Zahir "Bo" Bolourchi, Acting  
Louisiana Commissioner

STATE OF OKLAHOMA

  
Duane A. Smith  
Oklahoma Commissioner

  
Charles Lynn Dobbs  
Oklahoma Commissioner

**RED RIVER COMPACT RULES AND REGULATIONS**  
**To Compute and Enforce Compact Compliance**  
**REACH III, SUBBASIN 3**

(as amended 4/25/89)

1. These rules and regulations to be used to compute and enforce Compact compliance within Subbasin 3 of Reach III, Red River Compact, are adopted subject to the following conditions and assumptions.
  - a. It is fully understood that these rules and regulations should be modified whenever experience or detailed studies demonstrate the need for modification, and if the Commission should modify its interpretation of Compact provisions relating to this Subbasin.
  - b. **Definitions:**
    - (1) "Diversion", as used in these rules and regulations, is the net loss to a water source from use by a diverter, and is computed as the diversion from the water source minus the part of the diversion which is returned to the water source. Normally, return flows must be measured to be considered; however, the Engineering Committee may consider and recommend exceptions. As used herein, "diversion" is equivalent to "net diversion" from a water source and to "depletion" or "consumptive use" of a water source.
    - (2) "Drawdown", as used in these rules and regulations, means that period commencing on the first day water ceases spilling over the existing Caddo Lake spillway (or the raised spillway, if Caddo Lake is enlarged), and continuing so long as the Caddo Lake surface elevation continues to fall, until the day when appreciable inflow reaches Caddo Lake, causing the Caddo Lake surface elevation to rise leading to a spill from Caddo Lake.
2. **Management of Compact Compliance Computations.**
  - a. **Management Using State Centers:**
    - (1) State Engineering Committee representatives will establish State Computation Control Centers.
      - (a) State representatives will gather data, exchange data and meet via conference call to check on computation results, if necessary.
      - (b) The Engineering Committee will compute compliance with Compact.
  - b. **Management Period for Compact Compliance Computations:**
    - (1) Next week's State diversions will be allocated based on last week's compliance computations.
    - (2) It is each State's responsibility to limit its total State diversion allocation among its State diverters.
    - (3) The weekly period for use and flow data will start and end at 8:00 a.m. on Tuesday of each week.
    - (4) Data collection and dissemination will be completed on Tuesday of each week.
    - (5) Computation of Compliance will be completed on Wednesday of each week.
    - (6) Each State can request an update at any time.
  - c. **Management Improvements Studies:** The Engineering Committee will monitor the effect on accounting management of the following factors and will report thereon to the Commission whenever procedure changes appear desirable. 139

- (1) Errors caused by travel time.
  - (2) Future restrictions computed from past week's data.
  - (3) Failure to consider channel loss.
  - (4) Failure to consider ungaged return flows.
  - (5) Failure to consider flow trends.
  - (6) Addition of needed gages.
3. **Enforcement of Compact Compliance Requirements.** Each State will be responsible for insuring that the sum of the diversions by State users does not exceed the total State diversion authorized by the Red River Compact Commission. In this regard, each State will be responsible for establishing clear legal authority within its State for enforcing the restrictions imposed by the Red River Compact.
4. **Data Reporting Procedures.**
- a. **Streamflow Gaging Station Records:** The Engineering Committee will make arrangements with Corps of Engineers, the U.S. Geological Survey and with States as required to collect daily and/or weekly data, as needed, and forward to the State Computation and Control Centers.
  - b. **Diversion Records:** Each State will be responsible to collect weekly data, as needed, and forward to the State Computation and Control Centers.
  - c. **Archived Records:** Records will be archived by the Commission Chairman.
5. **General Compliance Requirements of Section 6.03 Red River Compact.**
- a. **Section 6.03 (b)(1):**
    - (1) **The Compact states:** "Texas shall have the unrestricted right to all water above Marshall, Lake O' the Pines, and Black Cypress damsites; however, Texas shall not cause runoff to be depleted to a quantity less than that which would have occurred with the full operation of Franklin County, Titus County, Ellison Creek, Johnson Creek, Lake O' the Pines, Marshall, and Black Cypress Reservoirs constructed, and those other impoundments and diversions existing on the effective date of this Compact. Any depletions of runoff in excess of the depletions described above shall be charged against Texas' apportionment of the water in Caddo Reservoir."
    - (2) Texas may use the bed and banks of the streams or tributaries available within this Subbasin to convey its developed water downstream from the aforesaid dam sites to specified authorized users. Such water would retain its identity and would not be subject to the Caddo Lake drawdown provisions of Section 5.b. of these rules until passing the designated point of diversion. Appropriate transportation losses will be approved by the Red River Compact Commission.
    - (3) Until both Marshall Reservoir (with an estimated capacity of 782,300 acre-feet and yield of 325,000 acre-feet annually) and Black Cypress Reservoir (with estimated capacity of 824,400 acre-feet and yield and 220,000 acre-feet annually) have been constructed, it will be virtually impossible for Texas to deplete runoff in excess of that authorized. In the future, whenever potential Texas depletions above Marshall, Lake O' the Pines, and Black Cypress damsites become a concern to Louisiana, procedures to compute Texas depletion of runoff in excess of that authorized by Section 6.03 (b)(1) of the Compact should be developed by
  - b. **Section 6.03 (b)(2):**
    - (1) **The Compact states:** "Texas and Louisiana shall each have the unrestricted right to use fifty (50) percent of the conservation storage capacity in the present Caddo Lake for the impoundment of water for state use, subject to the provision that supplies for existing uses of water from Caddo Lake, on date of Compact, are not reduced."

(2) Whenever water is spilling over the existing spillway at 168.5 feet above mean sea level, each state may withdraw or divert water from Caddo Lake without restriction.

(3) Whenever Caddo Lake is not spilling over the existing spillway at 168.5 feet above mean sea level, the total consumptive use by each state shall not exceed 8,400 acre-feet during the drawdown period, provided that neither state shall divert more than 3,600 acre-feet during any one month or 4,800 acre-feet during any two consecutive months.

c. **Section 6.03 (b)(3):**

(1) **The Compact states:** "Texas and Louisiana shall each have the unrestricted right to fifty (50) percent of the conservation storage capacity of any future enlargement of Caddo Lake, provided the two states may negotiate for the release of each state's share of the storage space on terms mutually agreed upon by the two states after the effective date of this Compact."

(2) This Compact provision requires no separate computation procedures but other rules may be changed if enlargement of Caddo Lake occurs. If enlargement of Caddo Lake is authorized in the future, the Engineering Committee should review and modify as necessary Rule 5 (b) and Rule 6.

d. **Section 6.03 (b)(4):**

(1) **The Compact states:** "Inflow to Caddo Lake from its drainage area downstream from Marshall, Lake O' the Pines, and Black Cypress damsites and downstream from other last downstream dams in existence on the date of the signing of the Compact document by the Compact Commissioners, will be allowed to continue flowing into Caddo Lake except that any manmade depletions to this inflow by Texas will be subtracted from the Texas share of the water in Caddo Lake."

(2) As indicated in paragraph 5 a. (2) above, it is virtually impossible for Texas at the present time to reduce inflow to Caddo Lake below that which would occur with both Marshall and Black Cypress Reservoirs constructed and operating. However potential Texas depletions become a concern to Louisiana, procedures to compute excess depletion by Texas of inflow to Caddo Lake should be developed by the Engineering Committee and presented for Commission Consideration.

e. **Section 6.03 (c):**

(1) **The Compact states:** "In regard to the water of interstate streams which do not contribute to the inflow to Cross Lake or Caddo Lake, Texas shall have the unrestricted right to Divert and use this water on the basis of a division of runoff above the state boundary of sixty (60) percent to Texas and forty (40) percent to Louisiana."

(2) The Engineering Committee will review known Texas diversion data for the previous year and report to the Commission any Texas non-compliance with Compact Section 6.03 (c).

f. **Section 6.03 (d):**

(1) **The Compact states:** "Texas and Louisiana will not construct improvements on the Cross Lake watershed in either state that will affect the yield of Cross Lake; provided, however, this subsection shall be subject to the provisions of Section 2.08."

- (2) The Engineering Committee will renew any known improvements on the Cross Lake watershed and report to the Commission any non-compliance with Compact Section 6.03 (d).

**6. Caddo Lake Content Accounting Procedure During Drawdown Periods.**

- a. Whenever water is spilled from Caddo Lake, both state's accounts are full and no accounting is necessary. Accounting shall start the first day of no-spill following each period of spilling and shall continue until the first day of spill in the next period of spilling. The accounting procedure for computing the quantity of water in Caddo Lake during periods of drawdown belonging to the States of Louisiana and Texas shall be as follows:

- (1) At the beginning of the drawdown, the Caddo Lake contents belong 50 percent to each state. Otherwise, begin with water ownership on Caddo Lake as shown in the most recent previous report.
- (2) Each State shall be credited with one-half of the inflow to Caddo Lake since the previous report.
- (3) Each State's account shall be reduced by its share of Caddo Lake evaporation losses during the period since the previous report.
- (4) Each State's account shall be reduced by its diversions from Caddo Lake since the previous report.
- (5) A State's account shall not exceed 50 percent of the capacity of Caddo Lake. If these accounting procedures result in a greater State content than 50 percent of the total capacity of Caddo Lake, the excess computed quantity shall be "spilled" into the other State's account as needed to bring the other State's account up, but in no case shall either State's account exceed 50 percent of the total capacity of Caddo Lake.

- b. Using a stage-area-capacity relationship concurred in by both States, the content of Caddo Lake at the end of each accounting period shall be determined and inflow for that period shall be computed as follows:

- (1) From the present content, as determined above, subtract the content determined at the end of the previous period.
- (2) Add to the figure resulting from Step (1) the total Texas and Louisiana diversions since the end of the previous period.
- (3) Add to the figure resulting from Step (2) the computed gross evaporation since the end of the previous period as determined in c. (2) below. This results in total inflow.

- c. Evaporation will be computed as follows:

- (1) The Weather Bureau's pan evaporation data shall be used to compute gross lake evaporation using a standard conversion coefficient agreed to by the engineer advisors of each State.
- (2) The average lake surface area for the accounting period shall be determined from the stage-area-capacity relationship concurred in by both States and multiplied by the gross lake evaporation as determined in Step (1) to determine the volume of evaporation for the period.

7. **Availability of Diversion Records.** Arrangements shall be made for all Texas and Louisiana diverters, during "drawdown" of Caddo Lake, to maintain daily diversion records open for inspection, and to provide weekly use data as required by Rule 2b. (3).